

SE Group's Copper Mountain Resort Water and Trails EA:
Class III Cultural Resource Inventory,
Summit County, Colorado

By
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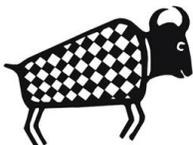
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Metcalf Archaeological Consultants, Inc.

Beyond Compliance

Est. 1980



ABSTRACT

Metcalf undertook cultural resource investigations under contract to SE Group, Inc., at Copper Mountain Resort, Summit County, Colorado, because the resort has proposed multi-season improvements. At the time of October fieldwork, the project area covered 570 acres. Because 374 acres had been previously inventoried for cultural resources, fieldwork included 196 acres of Class III pedestrian inventory in areas not covered by previous recent inventories. After Metcalf conducted the October fieldwork, project design changes were made in December, 2018; thus, some proposed developments in the updated project area, consisting of trails and camp sites, have not yet been inventoried for cultural resources. These new developments covering 84 acres will be surveyed in the 2019 field season and reported as an addendum to this document. It is anticipated that any newly discovered NRHP eligible cultural resources during 2019 survey will be avoided because the location of the proposed trails and campsites is flexible and can be easily re-designed.

During October fieldwork, five resources were newly recorded or revisited. Two are sites, and three are isolated finds. The three isolated finds are recommended as not eligible for inclusion on the National Register. The two sites (5ST109, 5ST585) were previously recorded and were updated for the current project. Both are recommended not eligible for inclusion on the National Register; however, avoidance of historic site 5ST109 is recommended due to the unknown nature and function of the cairn, Feature 2.

In addition, the OAHP-mapped site location of a collapsed and decaying multi-room log cabin with a small midden (5ST110) fell in the survey area; it was not evaluated during recording in 1976. This site was not observed during the October inventory, however, its location also overlaps the portion of the redesigned project area proposed for 2019 fieldwork; another attempt will be made to relocate the site at that time. It is possible that, if found, the site could extend into the currently reported project area.

Pending the relocation of unevaluated historic site 5ST110 in the summer of 2019, Metcalf recommends a finding of *no historic properties* for the currently reported project area. With avoidance of site 5ST109, no further work is recommended for the currently reported project area.



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Colorado Office of Archaeology and Historic Preservation

CULTURAL RESOURCE SURVEY MANAGEMENT INFORMATION FORM

Federal acres of Potential Effect/Project:	<u>570</u>	Acres surveyed:	<u>196</u>
State acres of Potential Effect/Project:	<u> </u>	Acres surveyed:	<u> </u>
Private acres of Potential Effect/Project:	<u> </u>	Acres surveyed:	<u> </u>
TOTAL	<u>570</u>	TOTAL	<u>196</u>

Legal Location of Project *(attach additional pages if necessary)*

Principal Meridian: 6th
 County: Summit
 USGS Quad Name: Copper Mountain 1970 (PR 1987)

Township	6S	Range	79W	Section	25	NE	1/4	SE	1/4
Township	6S	Range	79W	Section	35	SE	1/4	NE	1/4
Township	6S	Range	79W	Section	36	SW	1/4	NW	1/4
Township	6S	Range	79W	Section	36	SE	1/4	NW	1/4
Township	6S	Range	79W	Section	36	NE	1/4	SW	1/4
Township	6S	Range	79W	Section	36	SW	1/4	NE	1/4
Township	6S	Range	79W	Section	36	SE	1/4	NE	1/4
Township	6S	Range	79W	Section	36	NE	1/4	NE	1/4
Township	6S	Range	79W	Section	36	SW	1/4	SE	1/4
Township	6S	Range	79W	Section	36	SE	1/4	SE	1/4
Township	6S	Range	79W	Section	36	NE	1/4	SE	1/4
Township	6S	Range	79W	Section	36	NW	1/4	SE	1/4
Township	6S	Range	78W	Section	30	NE	1/4	SW	1/4
Township	6S	Range	78W	Section	30	NW	1/4	SW	1/4
Township	6S	Range	78W	Section	30	SW	1/4	SW	1/4
Township	6S	Range	78W	Section	30	NW	1/4	SE	1/4
Township	6S	Range	78W	Section	30	SW	1/4	SE	1/4
Township	6S	Range	78W	Section	31	NW	1/4	NW	1/4
Township	6S	Range	78W	Section	31	SW	1/4	NW	1/4
Township	6S	Range	78W	Section	31	NW	1/4	SW	1/4
Township	6S	Range	78W	Section	31	SW	1/4	SW	1/4
Township	6S	Range	78W	Section	31	SW	1/4	NE	1/4
Township	6S	Range	78W	Section	31	NW	1/4	SE	1/4
Township	7S	Range	79W	Section	01	NW	1/4	NE	1/4
Township	7S	Range	79W	Section	01	NE	1/4	NE	1/4
Township	7S	Range	79W	Section	01	SE	1/4	NE	1/4



Township	7S		Range	79W		Section	01		SW	1/4		NE	1/4	
Township	7S		Range	79W		Section	01		NW	1/4		SE	1/4	
Township	7S		Range	79W		Section	01		NE	1/4		SE	1/4	
Township	7S		Range	79W		Section	01		SE	1/4		SE	1/4	
Township	7S		Range	79W		Section	01		SW	1/4		SE	1/4	
Township	7S		Range	79W		Section	01		NW	1/4		SW	1/4	
Township	7S		Range	79W		Section	01		NE	1/4		SW	1/4	
Township	7S		Range	79W		Section	01		SE	1/4		SW	1/4	
Township	7S		Range	79W		Section	01		SE	1/4		NW	1/4	
Township	7S		Range	79W		Section	02		NE	1/4		NE	1/4	
Township	7S		Range	79W		Section	02		SE	1/4		SW	1/4	

Site Number	Site Type				Eligibility								Effect			Treatment / Management Recommendations								Comments
	Prehistoric	Historic	Paleontological	Unknown	Eligible	Needs Data	Not Eligible	Contributing	Non-Contributing	Supporting	Non-Supporting	No Historic Properties Affected	No Adverse Effect	Adverse Effect	No Further Work	Avoid / Preserve	Monitor	Test	Excavate	Archival Research	Archival Documentation	Other		
SITES																								
5ST109		X				X						X				X								
5ST585		X				X						X			X									
ISOLATED FINDS																								
5ST1543		X				X						X			X									
5ST1544		X				X						X			X									
5ST1545		X				X						X			X									



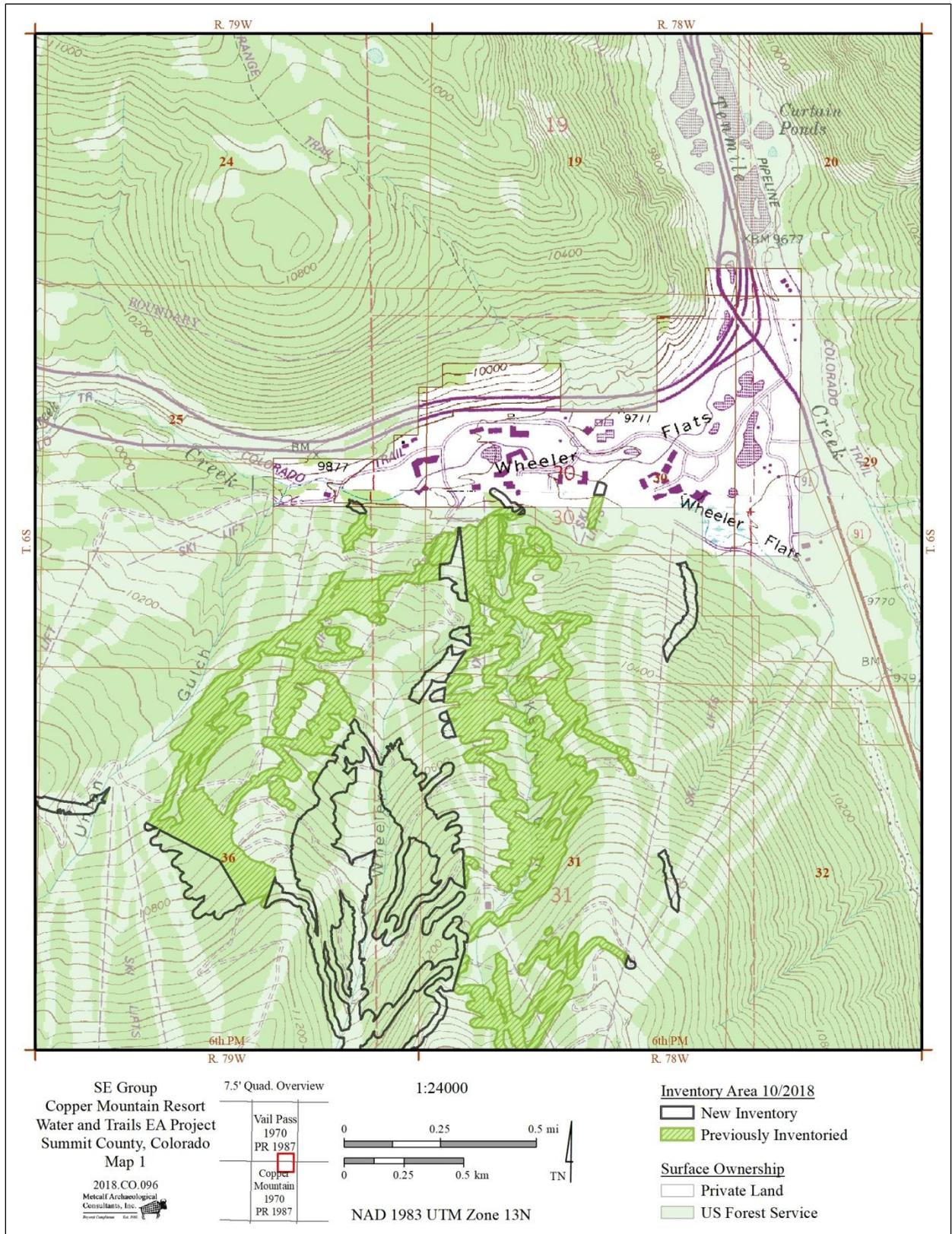


Figure 1. Project area location showing October 2018 fieldwork, Map 1 of 2



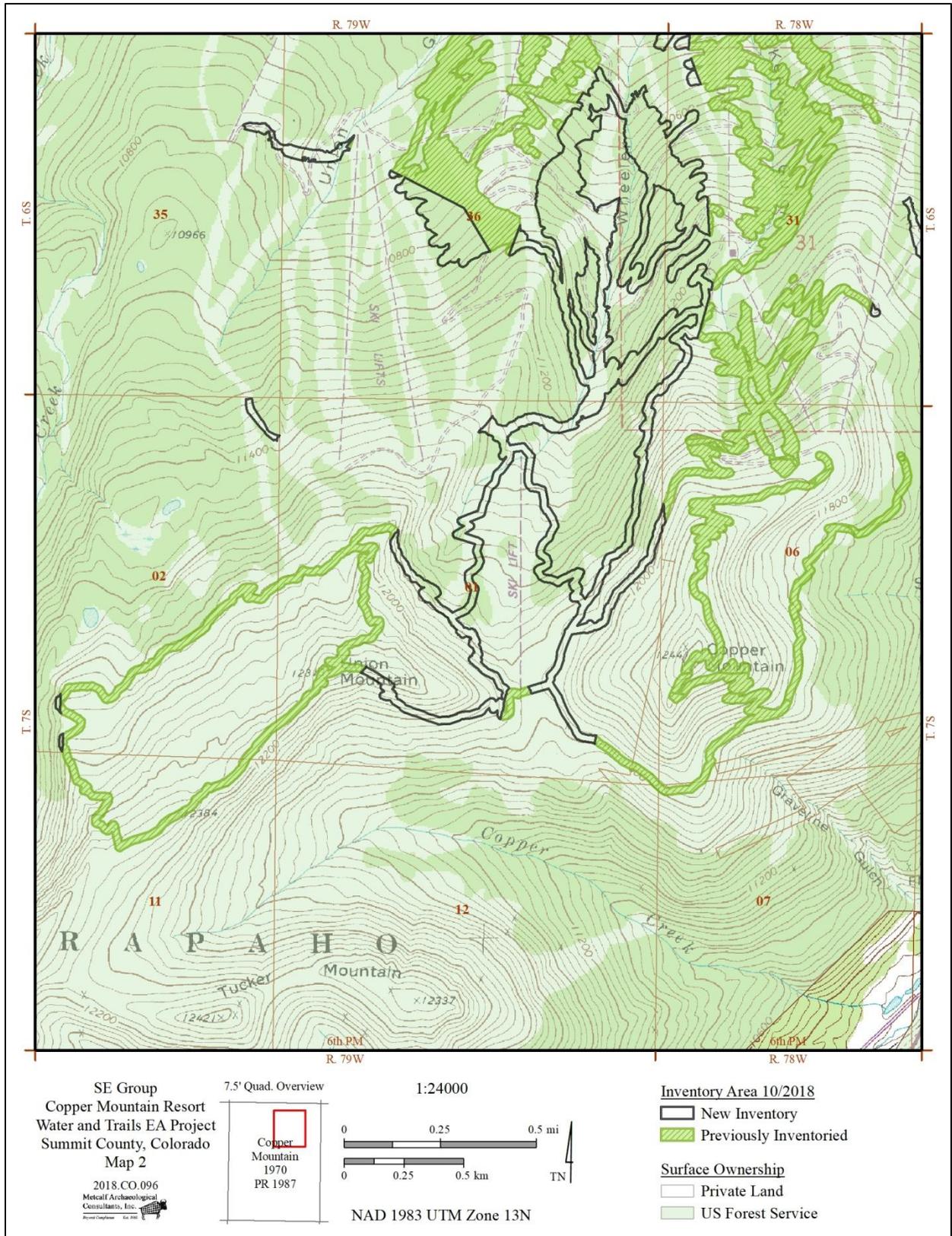


Figure 2. Project area location showing October 2018 fieldwork, Map 2 of 2



INTRODUCTION

Metcalf Archaeological Consultants, Inc. (Metcalf) conducted cultural resource investigations at Copper Mountain Resort, in Summit County, Colorado, for planned multi-season improvements (Figure 1, Figure 2 above). This work was conducted under contract to SE Group, Inc., Frisco, Colorado.

The project area is located in Township (T) 6S Range (R) 78W, sections 30 and 31; T6S R79W, sections 25, 35, and 36; T7S R78W, sections 6 and 7; and T7S R79W, sections 1, 2, 11, and 12. It is entirely on public land administered by the USDA Forest Service, White River National Forest (WRNF), in the Dillon Ranger District. The Forest Service is required to comply with Section 106 of the National Historic Preservation Act in permitting this new development. Metcalf's investigations and this report serve to help facilitate the Forest Service's Section 106 compliance.

Copper Mountain Resort plans several individual efforts as part of their multi-season development. These efforts include expansion of snowmaking coverage, expansion of the existing mountain bike trail network, implementation of hiking trails, extension of an existing road, and creation of camping-oriented summer programs. For the purposes of this investigation, the area of potential effect (APE) for both direct and indirect effects is considered to be the footprints of ground disturbance for the different development areas. The APE in this report refers to the project area as defined at the time of October 2018 fieldwork (Figure 1, Figure 2).

An Environmental Analysis (EA) for Copper Mountain Resort's improvements is currently in progress by the Forest Service. Due to project design changes in December, 2018 after Metcalf conducted the currently reported October fieldwork, some proposed developments in the redesigned project area (consisting of campsites and trails) have not yet been inventoried for cultural resources. Before implementing any approved project activities at Copper Mountain outside the currently reported October 2018 project area, the new developments will be surveyed using established protocol. Figure 3 and Figure 4 depict the redesigned project boundary which now includes 551 acres, consisting of 144 acres covered by Metcalf's October 2018 fieldwork, 323 acres covered by earlier inventories, and 84 acres requiring additional inventory (see Appendix A: Maps 5 to 8 for previous inventories and resources in the redesigned project area). Metcalf plans to conduct fieldwork on the latter 84 acres in 2019 when sufficient snowmelt has occurred to allow ground visibility. The results of the new survey will be addressed in an addendum to the current report that will be submitted to SE Group and WRNF for review. It is anticipated that any newly discovered NRHP eligible cultural resources during 2019 survey will be avoided because the location of the proposed trails and campsites is flexible and can be easily re-designed.

Importantly, the "Project Area" identified in Figure 1 and Figure 2 reflects the project area boundary prior to the December 2018 design changes. All specific areas of potential effect are shown, and they cover 570 acres. Due to adequate coverage by previous inventories, however, 374 acres of the Project Area did not require inventory as agreed during consultation with Tom Fuller, Heritage Program Director for the WRNF. Specifically, 196 acres underwent intensive cultural resource inventory for this project during October 2018.



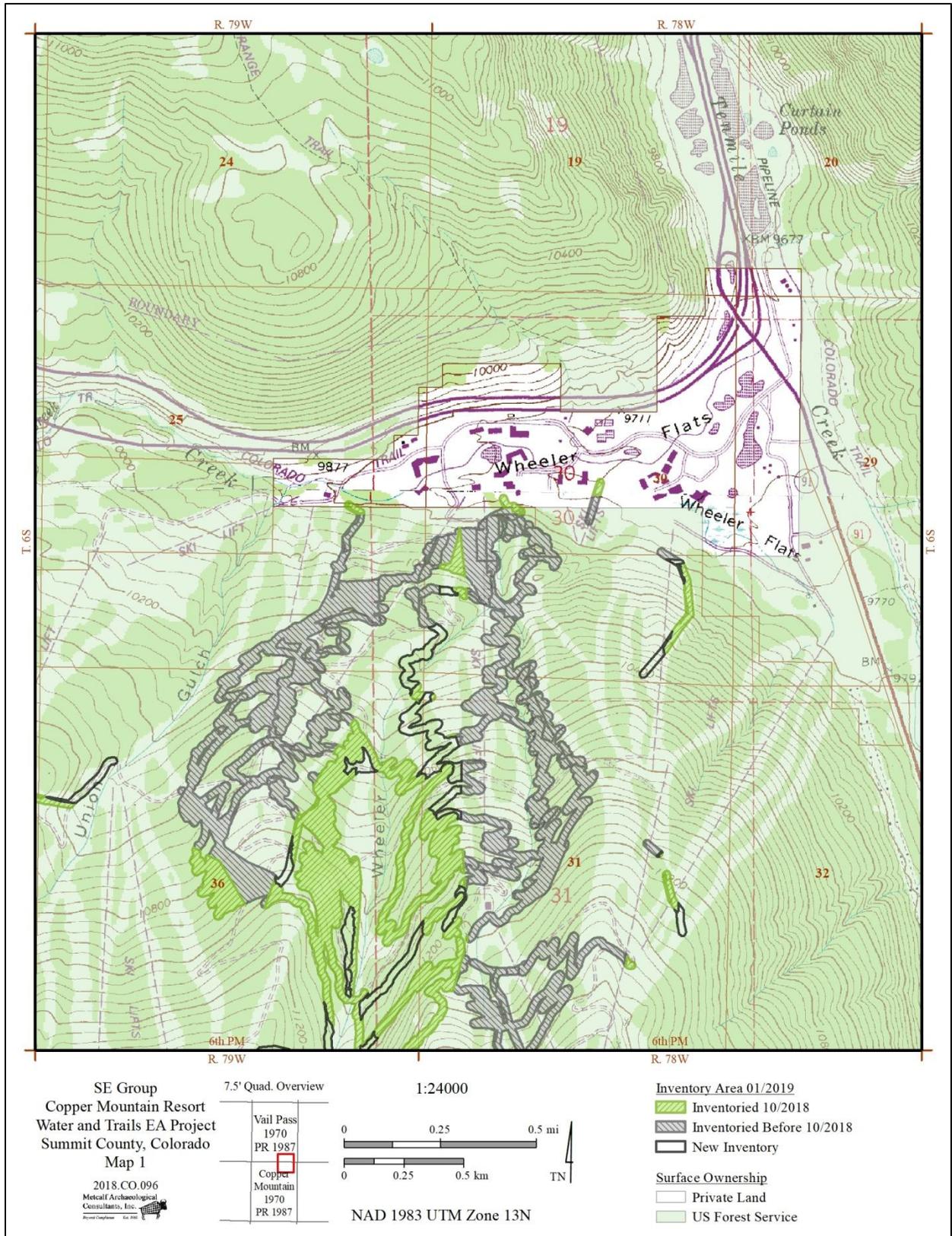


Figure 3. Redesigned project area showing additional fieldwork planned for 2019, Map 1 of 2



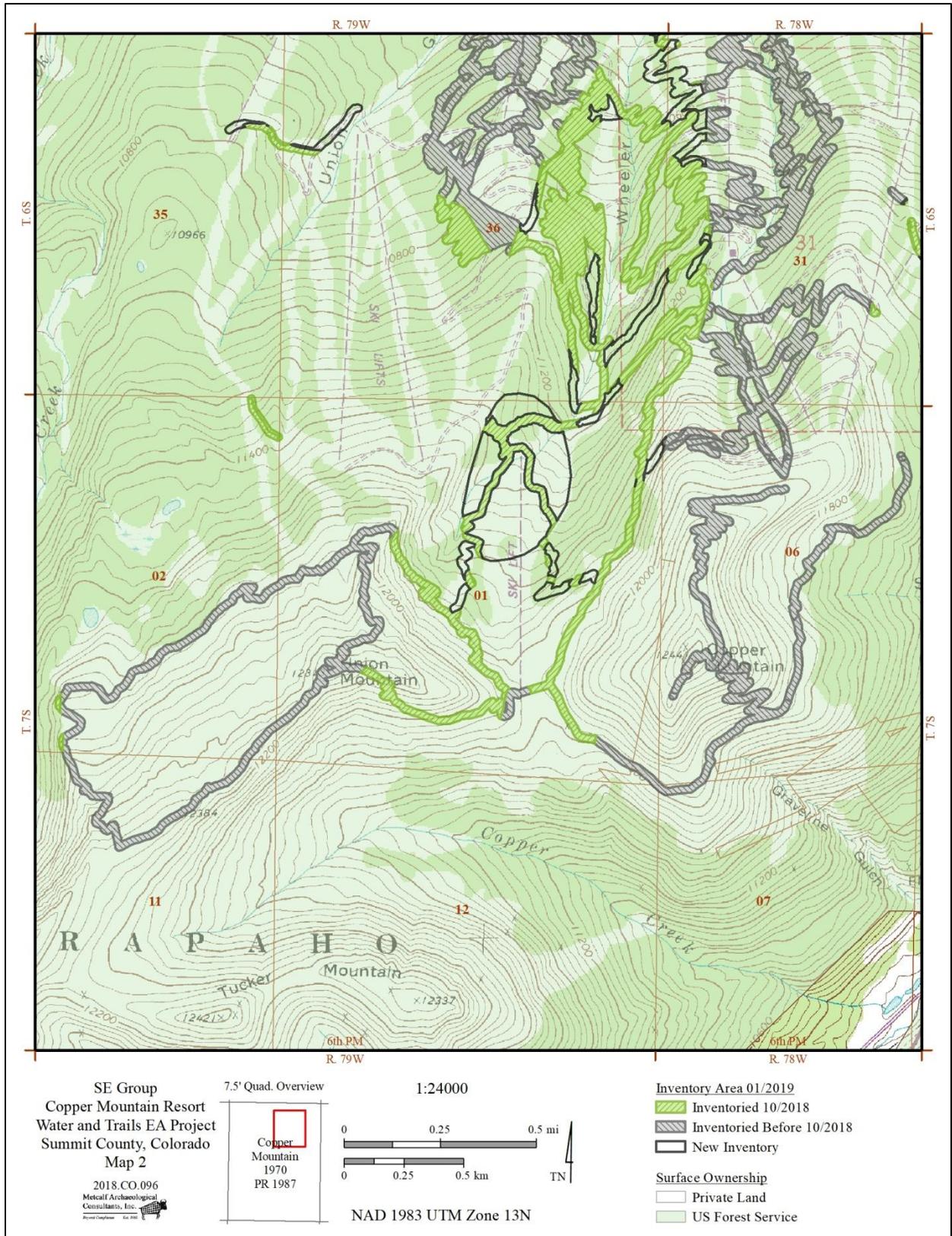


Figure 4. Redesigned project area showing additional fieldwork planned for 2019, Map 2 of 2



Fieldwork was conducted between 2 and 5 October, 2018 by Kelly Pool, John Scott, Garrett Williams, and Dante Nicolais. Weather was favorable for fieldwork with cool conditions. Work was conducted under USDA Forest Service Permit for Archaeological Investigations, Authorization ID #CAN611HR (expires 12/31/2020).

EFFECTIVE ENVIRONMENT

Williams (2016:2-3) provided an excellent discussion of the local environment for a recent Metcalf project at Copper Mountain Resort, and it is reproduced here:

The project area is located within the [White River] National Forest in the Southern Rocky Mountain physiographic province (Fenneman 1946). The area is generally characterized by steep mountain slopes, hills, ridges, and canyons. The project area is further located in the Gore Range, approximately six miles southwest of the community of Frisco in north-central Colorado. More specifically, the project area is on the northern faces of Copper Mountain and Union Mountain, within and adjacent to developed ski areas at Copper Mountain Resort. It overlooks West Tenmile Creek to the north, which flows east to its confluence with Tenmile Creek, which in turn flows northeast into the Dillon Reservoir.

The underlying geology mostly consists of Permian and Pennsylvanian-aged Maroon Formation sedimentary rocks, including Arkosic sandstone, siltstone, conglomerate, and local limestone. The lower slopes are mantled with Pleistocene-age glacial drift of the Bull Lake and Pinedale glaciations (Tweto 1979). Glacial action was prevalent along the Continental Divide and extended down most major side valleys. These glacial processes formed broad, steep, west-sloping ridges bordered by generally broad and steep U-shaped valleys which extend down from the hummocky, gentle to steep landscape at and above timberline (Black 1982).

The surface sediment within the project area is shallow and rocky, dark brown silty sand. Sediments are deflated and slopewashed with little potential for depth given the steep, north-facing slope of the project area. Sediments are limited to a thin O horizon consisting of organic duff with a thin underlying layer of humus and mixed dark brown silty sand with common gravels and cobbles. No official soil surveys have been carried out within the project area (United States Department of Agriculture 2016).

The elevation of the project area varies from about [9,700] feet to [12,300] feet above mean sea level (amsl). Drainages in the area include Union Gulch, Wheeler Gulch, and McKenzie Gulch, all of which flow north towards east-flowing West Tenmile Creek. Vegetation consists primarily of subalpine, lodgepole pine forest with ponderosa pine, spruce, and fir trees with a moderate understory of short grasses, shrubs, and forbs. Overall ground visibility was generally poor at about 20 percent, although it was patchy, with low to no



visibility within the lodgepole forest and moderate visibility within ski runs and disturbed areas.

The climate is typical of the Rocky Mountain region with low humidity and abundant sunshine. Afternoon showers are common in the spring and summer, with a warm fall and a cool, sunny, and snowy winter. Paleoclimate was similar, though with variations in both temperature and moisture. Several water sources in the area provide for an abundant and diverse faunal population including ground squirrel, rabbit, fox, golden eagle, magpie, marmot, mule deer, elk, mountain lion, and black bear.

Weather conditions during fieldwork were generally sunny and cool. Current land use is largely recreational, with winter skiing and summer hiking and biking.

PREVIOUS WORK AND CULTURE HISTORY

Metcalf requested formal files searches from the Colorado Office of Archaeology and Historic Preservation (OAHP) consisting of the project area plus all sections within a one-mile buffer. The formal files search included Sections 19-20 and 29-32 of T6S, R78W; Sections 23-27 and 34-36 of T6S, R79W; Sections 5-8 of T7S R 78W; and Sections 1-3 and 10-12 of T7S, R79W. It covers the project area inventoried during October fieldwork as well as the December 2018 project design changes. The files search was received from OAHP on January 11, 2019, and it supplemented Metcalf's extant files search data from the WRNF (Williams 2016), Compass, and Metcalf's previous work in the area (Table 1, Table 2).

The OAHP files search revealed 18 previous inventories in the files-searched sections; Metcalf's recent work in the project area (Williams 2016) is not yet depicted in OAHP data. In addition, three projects that are not listed by OAHP are in WRNF files. In all, 10 previous inventories from OAHP and WRNF data intersect the current project area (Table 1). These overlapping projects (MC.FS.NR172, ST.FS.NR88, ST.FS.R1, ST.FS.R18, ST.FS.R56, ST.FS.R57, ST.FS.R8, R2014021500024, R1987021500032, R1991021510005) were related to ski area expansion, communication pads, and a land exchange. Following WRNF guidance, Metcalf excluded 374 acres of inventory from the October project area, consisting of areas previously surveyed by more recent projects MC.FS.NR172, ST.FS.NR88, ST.FS.R1, ST.FS.R18, ST.FS.R57, ST.FS.R8, R2014021500024, R1987021500032, and R1991021510005 but not project ST.FS.R56 from 1976. Other nearby previous projects include several for mining operations, a fiber optic system, Interstate 70, and a land exchange. Inventories overlapping the October 2018 APE are shaded grey in Table 1.

The OAHP files search revealed 94 previously recorded cultural resources in the file-searched area; six additional resources that are not in OAHP data are in WRNF files (5ST452-453, 5ST455-458). These 100 resources are 53 sites and 47 isolated finds (Table 2). Twelve previously recorded resources are in the APE of October fieldwork, including four sites (5ST110, 5ST429, 5ST430, 5ST431) and eight isolates (5ST458, 5ST587-5ST590, 5ST592, 5ST613, 5ST615). Generally, most of the previously recorded resources in the area are historic in nature and include log structures, artifact scatters, resource related to mining activities, and



transportation. The few prehistoric sites are all chipped stone scatters. Previously recorded resources overlapping the October 2018 APE are shaded grey in Table 2.

Table 1. Files search results for previous inventories within one mile of the project area

OAHP Doc. # / USFS Doc. #	Project Title	Institution	Year
MC.CH.R96	A CULTURAL RESOURCE SURVEY OF INTERSTATES 25, 70, 225, AND 270, U.S. HIGHWAYS 34 AND 160, AND STATE HIGHWAYS 13 AND 470, FOR THE PROPOSED ADESTA COMMUNICATIONS FIBER OPTIC SYSTEM, COLORADO (C SW00-102)	Centennial	1999
MC.FS.NR15 / R1992021506023	CELLULAR ONE COMMUNICATION PADS AND ACCESS ROADS CULTURAL RESOURCES INVENTORY IN CLEAR CREEK, SUMMIT AND EAGLE COUNTIES, COLORADO (CRR# 15-06-23-92)	Metcalf	1993
MC.FS.NR172 / R2005021510063 R2008021510063	CULTURAL RESOURCE SURVEY AND MONITORING OF SMALL PROJECTS ON BRECKENRIDGE, KEYSTONE, AND COPPER MOUNTAIN SKI AREAS, SUMMIT AND EAGLE COUNTIES, DILLON RANGER DISTRICT	USFS- WRNF	2005
MC.FS.NR92	RESULTS OF THE AMERICAN METAL CLIMAX CORPORATION AND THE UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE, LAND EXCHANGE ARCHAEOLOGICAL INVENTORY	USFS- ARNF	1974
MC.FS.R253	ARCHAEOLOGICAL RECONNAISSANCE OF THE SELECTED USFS LANDS, CLIMAX LAND EXCHANGE AND APPENDIX	LOPA	1979
ST.CH.R2 / IR 70-2(176)	CULTURAL RESOURCE SURVEY OF I-70 BETWEEN SILVERTHORNE AND FRISCO AT THE SH 91 INTERCHANGE, SUMMIT COUNTY, IR 70-2(176)	CDoW	1990
ST.FS.NR88 / R2011021500055	CULTURAL RESOURCE INVENTORY OF THE COPPER MOUNTAIN BIKE TRAIL REROUTE, SUMMIT COUNTY (R2011021500055)	USFS- WRNF	2011
ST.FS.R1 / R1985021510021	A CLASS III CULTURAL RESOURCE INVENTORY OF THREE EXPANSION AREAS ON COPPER MOUNTAIN, SUMMIT COUNTY	TRC	1986
ST.FS.R110 / R2007021500049	A CLASS III CULTURAL RESOURCE INVENTORY OF THE TEN MILE CANYON MINE SAFETY CLOSURES SUMMIT COUNTY, COLORADO, WHITE RIVER NATIONAL FOREST	USFS- WRNF	2009
ST.FS.R18 / R1993021510033	A CULTURAL RESOURCE SURVEY OF COPPER BOWL, SUMMIT COUNTY (CRR 15-10-33-93)	TRC	1993
ST.FS.R25	WESTERN LAND GROUP SUMMIT LAND EXCHANGE CLASS III CULTURAL RESOURCE INVENTORY SUMMIT COUNTY, COLORADO.	Metcalf	1999
ST.FS.R35 / R2003021510003	SE GROUP COPPER MOUNTAIN RESORT: CLASS III CULTURAL RESOURCE INVENTORY, SUMMIT COUNTY, COLORADO (CRR#15-10-03-03)	Metcalf	2002
ST.FS.R56 / R1976021510004 R1976021510005	CULTURAL RESOURCE INVENTORY REPORT: SKI TRAIL NUMBER 2, COPPER MOUNTAIN, INCORPORATED (ORIGINAL REPORT) CULTURAL RESOURCE INVENTORY REPORT: 'A' LIFT AREA, UNION BOWL, COPPER BOWL, I-1 LIFT AREA AND EXTENSION, 0 LIFT AREA, 17 GLADE, 37 GLADE, AND 22-33-27 AREA (ADDENDUM)	G&K	1976
ST.FS.R57 / R1984021510042	A CLASS III CULTURAL RESOURCE INVENTORY OF THE COPPER MOUNTAIN EXPANSION AREAS, SUMMIT COUNTY	TRC	1984



OAHP Doc. # / USFS Doc. #	Project Title	Institution	Year
ST.FS.R8 / R1990021510038	A CLASS III CULTURAL RESOURCE INVENTORY AT COPPER MOUNTAIN, SUMMIT COUNTY (CRR 15-10-38-90)	TRC	1989
ST.FS.R87 / R2005021510045	THE CULTURAL RESOURCE SURVEY OF THE COPPER MOUNTAIN RESORT WINTER DAM REPLACEMENT PROJECT, SUMMIT COUNTY (R2005021510045)	USFS- WRNF	2005
ST.FS.R92	A PRELIMINARY REPORT ON A CLASS III CULTURAL RESOURCE INVENTORY OF A PROPOSED EGRESS ROAD ON COPPER MOUNTAIN SKI AREA, SUMMIT COUNTY, COLORADO	USFS- WRNF	1985
ST.FS.R94 / R2007021500059	COPPER MOUNTAIN RESORT TENMILE CREEK FACILITIES IMPROVEMENTS AND RESTORATION PROJECT A CLASS III CULTURAL RESOURCE INVENTORY FOR SE GROUP IN SUMMIT COUNTY, COLORADO (ORIGINAL AND ADDENDUM)	Metcalf	2007
R2014021500024	CRI OF ON-MTN DEVELOPMENTS AT COPPER MTN	Metcalf	2013
R1987021500032	CLASS III CRI OF 753 ACRES ON COPPER MOUNTAIN		1987
R1991021510005	CULTURAL RESOURCE RECON & INVENTORY OF 6 PARCELS OF HOMESTAK		1991
Centennial=Centennial Archaeology, Inc.; CDoH=Colorado Department of Highways; G&K=Gordon and Kranzush Archaeological Consultants; LOPA=Laboratory of Public Archaeology-CSU; Metcalf=Metcalf Archaeological Consultants, Inc.; TRC=TRC Mariah Associates, Inc; USFS-ARNF=United States Forest Service, Arapaho & Roosevelt National Forests; USFS-WRNF=United States Forest Service, White River National Forest			

Table 2. Files search results for previous resources within one mile of the project area

Resource No.	NRHP Status	General Age	Site Type/Name	Institution	Year	OAHP Doc. No.	In APE
5ST.101	NE	Historic	Mine prospect/tent camp	USFS	1976	ST.FS.R56; ST.FS.R1	No
5ST.102	UNK	Historic	First Cabin	G&K	1976	ST.FS.R56	No
5ST.103	NE	Historic	Road and trash scatter	G&K; Metcalf	1976	ST.FS.R56	No
5ST.104	UNK	Historic	Sheep pens	G&K	1976	ST.FS.R56	No
5ST.108	UNK	Historic	Touring Cabins	G&K	1976	ST.FS.R56	No
5ST.109	UNK	Historic	Habitation - log cabin	G&K	1976	ST.FS.R56	No
5ST.110	UNK	Historic	Wheeler Ruins	G&K	1976	ST.FS.R56	Yes
5ST.126	NE	Historic	Habitation - log cabin	CDoH	1977	No OAHP doc. no. associated	No
5ST.131	UNK	Prehistoric	Lithic scatter	J. Gooding	1975	No OAHP doc. no. associated	No
5ST.137	UNK	Prehistoric	Lithic scatter	LOPA	1978	MC.FS.R253	No
5ST.138	UNK	Prehistoric	Lithic scatter	LOPA	1978	MC.FS.R253	No
5ST.139	UNK	Prehistoric	Lithic scatter	LOPA	1978	MC.FS.R253	No
5ST.140	UNK	Historic	Habitation - Trash scatter	LOPA	1978	MC.FS.R253	No
5ST.152	NE	Historic	Wheeler Guard Station	USFS	1981	ST.FS.R16; MC.FS.R135	No
5ST.317	NE	Historic	Isolated find	TRC	1984	ST.FS.R57	No
5ST.329	NE	Historic	Wheeler ~ Solitude	Unknown	1979	No OAHP doc. no. associated	No
5ST.330	NE	Historic	Lind Olie Homestead	Unknown	1975	No OAHP doc. no. associated	No
5ST.332	NE	Historic	Woodside Narrows	Unknown	1979	No OAHP doc. no. associated	No
5ST.421	NE	Historic	Bridge - F-12-AG	CDoH	1985	MC.CH.R1	No
5ST.428	NE	Prehistoric	Lithic scatter	TRC	1985	ST.FS.R1	No



Resource No.	NRHP Status	General Age	Site Type/Name	Institution	Year	OAHP Doc. No.	In APE
5ST.429	NE	Historic	Prospect pit	TRC	1985	ST.FS.R1; ST.FS.R134	Yes
5ST.430	NE	Historic	Mine	TRC	1985	ST.FS.R1	Yes
5ST.431	NE	Historic	Prospect pit	TRC	1985	ST.FS.R1	Yes
5ST.432	NE	Historic	Habitation - log cabin	TRC	1985	ST.FS.R1	No
5ST.433	NE	Historic	Habitation - log cabin	TRC	1985	ST.FS.R1	No
5ST.434	NE	Historic	Isolated find	TRC	1985	ST.FS.R1	No
5ST.435	NE	Historic	Isolated find	TRC	1985	ST.FS.R1	No
5ST.452	ND	Historic	Log cabin and foundation	TRC	1987		No
5ST.453	ND	Historic	Mine shaft and spoil pile	TRC	1987		No
5ST.455	ND	Historic	Log structure and mine shaft	TRC	1987		No
5ST.456	UNK	Unknown	Unknown site	TRC	1987		No
5ST.457	ND	Prehistoric	Isolated resource, 1 flake	TR	1987		No
5ST.458	UNK	Unknown	Isolated resource	TRC	1987		Yes
5ST.460	NE	Historic	Bridge - F-12-AN	CDoH	1987	MC.CH.R163; MC.CH.R4	No
5ST.461	NE	Historic	Bridge - F-12-AO	CDoH	1987	MC.CH.R163; MC.CH.R4	No
5ST.478	NE	Historic	Trash scatter	TRC	1989	ST.FS.R8	No
5ST.479	NE	Historic	Trash scatter	TRC	1989	ST.FS.R8	No
5ST.480	ND	Historic	Railroad grade	TRC	1989	ST.FS.R8	No
5ST.481	NE	Historic	Mining camp	TRC	1989	ST.FS.R8	No
5ST.482	NE	Historic	Mining complex	TRC	1989	ST.FS.R8	No
5ST.483	NE	Historic	Mining complex	TRC	1989	ST.FS.R8	No
5ST.484	NE	Historic	Habitation - log cabin	TRC	1989	ST.FS.R8	No
5ST.485	NE	Historic	Mining complex	TRC	1989	ST.FS.R8	No
5ST.486	NE	Historic	Isolated find	TRC	1989	ST.FS.R8	No
5ST.487	NE	Historic	Isolated find	TRC	1989	ST.FS.R8	No
5ST.488	NE	Historic	Mining complex	TRC	1989	ST.FS.R8	No
5ST.582	NE	Historic	Mine	TRC	1993	ST.FS.R18	No
5ST.583	NE	Historic	Mine	TRC	1993	ST.FS.R18	No
5ST.584	NE	Historic	Wooden structure	TRC	1993	ST.FS.R18	No
5ST.585	NE	Historic	Mine	TRC	1993	ST.FS.R18	No
5ST.586	NE	Historic	Isolated feature	Metcalf; TRC	1993	ST.FS.R18	No
5ST.587	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	Yes
5ST.588	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	Yes
5ST.589	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	Yes
5ST.590	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	Yes
5ST.591	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.592	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	Yes
5ST.593	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.594	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.595	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.596	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.597	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.598	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.599	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.600	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.601	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.602	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.603	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No



Resource No.	NRHP Status	General Age	Site Type/Name	Institution	Year	OAHP Doc. No.	In APE
5ST.604	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.605	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.606	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.607	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.608	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.609	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.610	NE	Historic	Isolated find	TRC	1993	ST.FS.R18	No
5ST.611	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.612	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.613	NE	Historic	Isolated find	TRC	1993	ST.FS.R18	Yes
5ST.614	NE	Historic	Isolated find	TRC	1993	ST.FS.R18	No
5ST.615	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	Yes
5ST.616	NE	Historic	Isolated find	TRC	1993	ST.FS.R18	No
5ST.617	NE	Historic	Isolated find	TRC	1993	ST.FS.R18	No
5ST.618	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.619	NE	Historic	Isolated feature	TRC	1993	ST.FS.R18	No
5ST.892.1	NE	Historic	Interstate 70	State of Colorado; ACRE	2002	ST.FS.R106; MC.SHF.R85	No
5ST.892.4	SUP	Historic	Interstate 70, Vail Pass	Dill Historians; CDOT	2015	No OAHP doc. no. associated	No
5ST.903	NE	Historic	Isolated feature	Metcalf	2002	ST.FS.R35	No
5ST.1044	NE	Historic	Isolated find	USFS-WRNF	2005	ST.FS.R87	No
5ST.1045	NE	Historic	Isolated find	USFS-WRNF	2005	ST.FS.R87	No
5ST.1046	NE	Historic	Isolated find	USFS-WRNF	2005	ST.FS.R87	No
5ST.1094	NE	Historic	Spaulding Gulch Cabin	USFS-WRNF	1985	ST.FS.R92	No
5ST.1181	NE	Historic	Isolated feature	BLM-GFO; USFS-WRNF	2007	ST.FS.R110	No
5ST.1189	NE	Historic	Isolated feature	USFS-WRNF	2007	ST.FS.R110	No
5ST.1190	NE	Historic	Copper Creek Mine	USFS-WRNF	2007	ST.FS.R110	No
5ST.1206.1	NE	Historic	Denver and Rio Grande Railroad - Copper Mountain Branch	Metcalf	2007	ST.FS.R94	No
5ST.1213	NE	Historic	Homestead	Metcalf	2007	ST.FS.R94	No
5ST.1214	NE	Historic	Tenmile stock bridge	Metcalf	2007	ST.FS.R94	No
5ST.1216.1	NE	Historic	Tenmile stock trail	Metcalf	2007	ST.FS.R94	No
5ST.1230	NE	Historic	Trash scatter	Metcalf	2007	ST.FS.R94	No
5ST.1231	NE	Historic	Trash scatter	Metcalf	2007	ST.FS.R94	No

E=Eligible; NE=Not eligible; UNK=Eligibility unknown or not provided on site form

ACRE=Associated Cultural Resource Experts; CDoH=Colorado Department of Highways; G&K=Gordon and Kranzsch Archaeological Consultants; LOPA=Laboratory of Public Archaeology-CSU; Metcalf=Metcalf Archaeological Consultants, Inc.; TRC=TRC Mariah Associates, Inc; USFS-ARNF=United States Forest Service, Arapaho & Roosevelt National Forests; USFS-WRNF=United States Forest Service, White River National Forest



Three of the four sites in the October APE are mining-related, recorded by TRC in 1985 as part of a Copper Mountain Resort expansion project (Acklen 1986). Site 5ST429 is two prospect pits; site 5ST430 is a mine; and site 5ST431 is one prospect pit. All three sites have been determined not eligible, with OAHP concurrence, and were thus not revisited during the current project. All three lay in previously surveyed portions of the APE that did not require re-inventory.

The fourth site, 5ST110 or Wheeler Ruins, was recorded by Gordon and Kranzush (1976) during a Copper Mountain Resort inventory. It was described as a multi-room log cabin with a small midden, and they noted the site's condition as "badly decomposed and in state of collapse—probably disturbed by recent recreation." It was not evaluated at the time of recording, and avoidance was recommended. The site was not observed during the October inventory. However, its OAHP-mapped location overlaps the redesigned project area proposed for 2019 fieldwork, and another attempt will be made to relocate it at that time (Appendix A, Map 8).

As isolated resources that are generally considered insignificant, none of the eight previously recorded isolated finds in the APE (5ST458, 5ST587-5ST590, 5ST592, 5ST613, 5ST615) were revisited for the current project. Seven (5ST587-5ST590, 5ST592, 5ST613, 5ST615) lay in previously surveyed portions of the APE that did not require re-inventory. Recorded during a TRC survey for Copper Mountain Resort (Acklen 1993), these isolates included prospect pits (5ST587, 5ST592); historic rock piles (5ST588, 5ST590); an adit (5ST589); a tin can fragment (5ST613); and a historic depression, possibly a foxhole (5ST615). Only one isolate (5ST458) lay in a current inventory area, and no artifacts or features were observed during the current inventory in its mapped location. This isolate was recorded by TRC in 1985 as part of a Copper Mountain Resort expansion project (Acklen 1986).

Two previously recorded sites that were mapped near the APE were revisited and updated for the current project; both are discussed in detail with project results, below. Site 5ST109, a cabin and a cairn, was not evaluated during original recording. It was found 300 ft south of its OAHP-plotted location and re-recorded with a new map plot. It is recommended to be not eligible for inclusion on the National Register and is outside the APE of the current project. Site 5ST585 was revisited because its NRHP evaluation lacked OAHP concurrence. It was found roughly 100 ft northeast of its OAHP-plotted location. Metcalf agrees with the existing not eligible recommendation, and the site is outside the APE of the current project.

The General Land Office (GLO) plats for the townships containing the project area were accessed on-line by Metcalf in October of 2018 via the BLM's Federal Land Records Site (www.glorerecords.blm.gov). The original plats of the T6S R 78W township (1883), the T7S R 78W township (1883), the T6S R 79W township (1885), and the T7S R 79W township (1885) show no cultural features in the project area.

Historic USGS quadrangles, examined on-line via the USGS Historical Topographic Map Explorer (<http://historicalmaps.arcgis.com/usgs/>), reveal that the oldest USGS topo map of the area is the 1:250,000 scale Leadville quadrangle from 1891. The oldest 7.5' quadrangle is the Copper Mountain quad from 1970; this quad, photo-revised in 1987, is the version currently available. None of these maps, prior to the 1987 photo-revised Copper Mountain quad, show any cultural features in the project area. The only historic resources depicted on these maps near



the project area are historic roads, including a trail along Wheeler Gulch and trails along Wheeler Flats. These trails were not encountered during the current project.

An overview of the prehistoric culture history of the area is provided in *Colorado Prehistory: A Context for the Northern Colorado River Basin* (Reed and Metcalf 1999). Regarding local history, the theme-based Historic Period context of the area is available in *Colorado History: A Context for Historical Archaeology* (Church et al. 2007). The reader is directed to those documents for general information, and Williams (2016:4) provides a good summary of history and land use specific to the Copper Mountain project area:

Historic land use in this area was initially limited to explorers and fur trappers who generally utilized the region's major drainages. While trappers and explorers moved through the general area, European use and subsequent settlement of the landscape surrounding Copper Mountain began with the Colorado gold rush in 1859 when thousands emigrated to the Breckenridge area to try their fortunes. Acklen and Earls (1987) provide a summary of both the prehistory and history of the more immediate area surrounding the current project area. Graveline Gulch to the east of the project area became the center of mining activity around Copper Mountain. The easily accessible gold did not last, and the miners went elsewhere to seek their fortunes. By the end of the 1860s, the population in the area that later became Summit County had precipitously dropped to a few hundred (Acklen and Earls 1987).

Silver was discovered along Tenmile Creek in 1879 and touched off another cycle of booming mining activities. Numerous towns sprang up along the creek, bringing more people into the area. Rich strikes in Leadville swelled the population to over 35,000, which brought a related boom and overexploitation of the forest resources. The forests in the Copper Mountain area were clear cut to supply the mines with support timbers, the smelters with fuel, the associated camps and towns with building materials, and new railroads with construction materials.

Following this boom period, in 1893, Congress effectively de-monetized silver, which resulted in the "silver panic" and a lengthy local economic downturn (Aspen Historical Society 2014). The mining boom in the Rockies drove the expansion of the railways and fostered the development of agriculture, ranching, and other local industries that began primarily to support mining efforts. The opening of vast portions of the West for settlement with the various homestead acts also contributed to settlement of the area. See also Athearn (1981), Buckles and Buckles (1984), and Mehls (1984) for summaries of the historic era in the Colorado mountains. Eventually, tourism, including hunting, fishing, rafting, and skiing, became important to the local economy. Colorado experienced a skiing "boom" in the 1940's, and during the 1946-1947 season the Arapahoe Basin Ski Area began to serve tourists, followed by Breckenridge in 1961, and finally Copper Mountain in 1972 (Summit County Colorado 2016). The ski and tourist industries currently comprise a large part of the local economy.



FIELD METHODS

Field inventory involved pedestrian transects spaced at no greater than 20 m intervals over the inventory area. The survey area inventory was oriented to NAD 83 UTM Zone 13 cardinal directions. In-field navigation used GIS data on hand-held Trimble GeoExplorer 6000 GNSS units with real-time WAAS correction generally in the 1 m to 2 m range and post-processed correction to sub-meter. Metcalf's field team relied on ESRI format GIS data provided by SE Group of the locations of the various proposed developments; these were not staked in the field.

Ground visibility ranged from good to poor for discovery of artifacts and surface features. Ground surface visibility ranged from near 0% in the heavily forested areas up to 50% or more in exposed, grassy areas. Careful attention was paid to anthills, rodent backdirt piles, and subsurface exposures such as road cuts and disturbance areas, drainage cutbanks, and other localized eroded areas.

Upon discovery of cultural materials, the immediate area was more intensively examined to determine the nature and extent of the resource and determine if the resource should be considered a site, an isolated find, or a non-site. The WRNF defines a site as a locus of previous human activity at least 50 years old, at which the preponderance of evidence suggests either one-time diagnostically interpretable use or repeated use over time, or multiple classes of activities. An isolated find is defined as one or more culturally modified objects not found within the context of a site as described above. Isolated finds lack evidence of, or potential for, additional cultural materials or features in the immediate vicinity. Exceptions to this definition include a single core reduction event with a single core and associated reduction debitage; a pot/bottle drop representing a single vessel; or five or fewer prospect pits with/or without artifacts and with no associated historic structures or features. No artifacts were collected during the project inventory.

Metcalf characterizes artifacts in the field by class (e.g., debitage, flake tool, ground stone) and material type (e.g., chert, quartzite, sandstone). Debitage is described as primary, secondary, tertiary, or shatter to provide a rough idea of the predominant flintknapping stage represented by the assemblage. Primary flakes are defined as having 100 percent cortex on their dorsal surfaces; secondary flakes have between 0 and 100 percent cortex on their dorsal surfaces; tertiary flakes lack cortex; and shatter does not have a distinguishable ventral surface. Generally, only diagnostic artifacts are collected, and collection only occurs in limited circumstances with permission from the WRNF. All field notes, maps, and digital images are on file at the Metcalf office in Eagle, Colorado.

RESULTS

Five resources were newly recorded or revisited; two are sites (Table 3), and three are isolated finds. The two sites (5ST109, 5ST585) were previously recorded and were updated for the current project. Both are recommended not eligible for inclusion on the National Register, but avoidance of the cabin and cairn site (5ST109) is recommended. The three isolated finds are recommended as not eligible for inclusion on the National Register. Resource locations are provided in Appendix A; site sketch maps are in Appendix B; and OAHP cultural resource forms are in Appendix C (under separate cover). All appendices are included only in agency copies



and are not for public distribution. Finally, a list of native plants known to be present in the project area and documented as part of the biological studies for the project is provided.

Table 3. Sites

Site No.	Class	Description	Eligibility	Recommendation
5ST109	Historic	Cabin and cairn	NE	Avoidance
5ST585	Historic	Mine shaft	NE	No further work

SITES

5ST109. This previously recorded historic cabin and cairn site lies in the boundary of Copper Mountain Resort on federal land that is managed by the USDA Forest Service, WRNF. Measuring roughly 70-x-60 ft (22-x-19-m), it is situated on the north slope of Copper Mountain, east of north-trending Wheeler Gulch. Specifically, the site occupies a clearing on a small gently north-sloping bench, surrounded by a subalpine forest of spruce and fir trees (Figure 5). Very little underbrush or small plants are present, and pine duff largely blankets the surface. For that reason, no surface visibility is present, apart from the Forest Service trail which enters the site from the south and forks northwest and northeast at the cabin and cairn (Appendix B, Map 1). View of the surrounding area from the site is poor, limited by the thick forest. Sediment is brown loam of variable and shallow depth. Cobbles and boulders are exposed, with numerous small angular pebbles mixed in the loam. Slopewash has accumulated inside the cabin ruin along its western side. No stable deposition is present that exhibits the potential to preserve a buried and datable continuous cultural level. The site exhibits disturbance from erosion and deflation, and a signed Forest Service trail passes through it.

The site was revisited during the current project. It was found 300 ft south of the OAHP-plotted location, and its topographic plot has been updated. Originally recorded in 1976, the site is listed in OAHP files as “no evaluation;” the site form recommends it should be avoided and protected (Gordon and Kranzush 1976). It consists of a collapsed log cabin (Feature 1) and a cairn with an upright stone at its southern end (Feature 2). No artifacts were observed in association during the current revisit.

Feature 1 is the collapsed ruin of a log cabin, with its long axis oriented generally northwest-southeast (334°) (Figure 6). The north wall measures a maximum of 9 ft from log end to log end, and the east wall measures a maximum of 12’8” from log end to log end. The northeast corner (the most intact) is about 4 ft high, and eight courses of logs remain in that corner although they are askew. The logs at that corner are notched, and notching is visible at the southeast corner as well. Three partial logs remain along the west wall, and nine logs are present in various states along the north wall. A single cut log on the east wall suggests the presence of a window or door on that side. No artifacts or nails were observed. No evidence of the roof remains.





Figure 5. 5ST109 site overview southwest, with person at Feature 1 and with Feature 2 at far left (Roll 815-18, image 8, G. Williams, 10/03/2018).



Figure 6. 5ST109 Feature 1, cabin, view north. Note trail marker on tree at left (Roll 815-18, image 9, G. Williams, 10/03/2018).



The cabin has deteriorated in the four decades since original recording, at which time a milled lumber door with a sheared slide bolt lay to its southeast (Gordon and Kranzush 1976). The door originally opened to the south/southeast at the southwest corner of the structure. In addition, a low board shelf for sleeping or storage was observed in 1976 along the western wall. Square nails were present, no chinking was observed, and logs were noted to have been cut with a saw then notched with an axe.

Situated roughly 9 ft south of the cabin, Feature 2 was originally described as “a rock structure or cairn built of local slabs that appears to have been disturbed” (Gordon and Kranzush 1976). In 1976, measurements were recorded as 3’6”-x-2’4”-x-33” high. The sketch map indicates it was oriented north-south and rectangular, with the largest two slabs at the south end. It currently measures 8’2”-x-6’7”-x-21” high, and an upright stone reaching 21” in height forms the south edge of the rock cluster (Figure 7). The feature has gained about 4 ft in both length and width since original recording, probably through rock tumble. In addition, a depression about 1 ft in diameter was noted just 8” north of the upright stone. At least 20 rocks are currently present, and the smallest six stones lie loose on top of the other stones which are well-sodded-in.



Figure 7. 5ST109 Feature 2, cairn, view east, ruler at 2 meters (Roll 815-18, image 16, G. Williams, 10/03/2018).

As originally reported by Gordon and Kranzush (1976), the site was unlikely to have been a habitation based on the lack of a midden. Instead, “local authority Ms. Penny Lewis of Copper Mtn. indicated that this site could have been a shepherd cache dating from about 1900.” In any case, there are no indicators of age or specific function preserved in association with the cabin and cairn. The site is not depicted on the 1883 GLO map, and no patents are on record in this legal section.



The site was not evaluated at original recording. Although it has deteriorated since that time, it currently retains some integrity, specifically the aspects of location, setting, feeling, and design. Integrity of materials is lacking, as no evidence remains of the cabin roof and many of the cabin's logs are missing. Also, the door and the shelf noted during original recording are no longer present. Further, integrity of workmanship is compromised by the ruined nature of the cabin. Finally, the site does not retain integrity of association, since it is not known to be associated with important people or events. With regard to the four NRHP criteria, the site is not associated with events that have made a significant contribution to the broad patterns of our history (Criterion A), nor is it known to be associated with a significant person in our past (Criterion B) or to exhibit qualities that are notable examples of construction (Criterion C). Further, the site does not appear to exhibit the potential to contribute information to our history that is not already available in written or oral documentation (Criterion D). Therefore, although the site retains some integrity, it is recommended to be not eligible for inclusion on the NRHP. No further work is recommended, but avoidance of the site is recommended due to the unknown nature and function of the cairn, Feature 2.

5ST585. This previously recorded site consists of a spoil pile and a vertical rectangular shaft sunk into a northwest-facing mountain slope located northeast of and below Jacque Peak in Copper Mountain Resort (Figure 8). The area is tundra, vegetated with low thick grasses. Sediment is residual dark brown loam. A north-trending intermittent stream that drains into Jacque Creek lies far below the site, and Jacque Creek flows into Guller Creek, a tributary of West Tenmile Creek. Erosion, deflation, and structural decay have affected this site.

It was originally recorded by Mariah Associates during the Copper Bowl Survey (Acklen 1993), and the original topographic plot was shifted roughly 100 ft northeast during the current revisit (Appendix B, Map 2). Situated on federal land managed by the WRNF, the site measures roughly 30-x-26-ft (9-x-8-m). At its mouth, the shaft is 6.5 ft long, about 3 ft wide, and was reported by Acklen in 1993 to be 3 ft deep (Figure 9). It is now about 6 ft deep and appears to extend even deeper than that in the northwest corner. Also noted in 1993 was intact log cribbing on all the side walls. Observations made during the current revisit, however, noted the uppermost few rows of cribbing are detaching from the walls and collapsing into the shaft. A spoil pile covers the slope below the shaft and extends about 15 ft from the shaft's upper north side. Similar to the original recording, neither artifacts nor evidence of a superstructure were observed. Rather than a mine shaft as Acklen (1993) proposed, the lack of artifacts and a superstructure along with the shaft's small size suggest it may have instead functioned as a mine ventilation shaft.

The site's current evaluation is not eligible for inclusion on the National Register. Acklen (1993) made that recommendation because the site met no National Register criteria and was "not unique;" he stated that any data potential had been exhausted during survey. Metcalf found nothing during this current revisit to alter the existing recommendation of not eligible, although the site retains some integrity. As a mine-related feature, this isolated shaft appears to retain integrity of location, design, setting, materials, workmanship, and feeling, but lacks integrity of association with an important person or event. It meets none of the four National Register criteria. It is not associated with events that have made a significant contribution to the broad patterns of our history (Criterion A), and it is not known to be associated with an important



person in our past (Criterion B) or to exhibit qualities that are notable examples of construction (Criterion C). Further, the site does not appear to exhibit the potential to contribute information to our history that is not already available in written or oral documentation (Criterion D). No further work is recommended.



Figure 8. 5ST585 site overview west, with Jacque Peak at upper left of image (Roll 615-18, image 5, J. Scott, 10/05/2018).



Figure 9. 5ST585 Feature 1, vertical shaft, view northwest; tape at 1 m (Roll 615-18, image 2, J. Scott, 10/05/2018).



ISOLATED FINDS

Three isolated finds were newly recorded during this project (Table 4). All are recommended not eligible for inclusion on the National Register, and no artifacts were collected.

Table 4. Isolated finds

Isolate No.	Class	Description
5ST1543	H	Cultural material scatter including <50 artifacts, largely cans. Most of the cans, a brown bottle base with no maker's mark, and a large square can fragment measuring 9" diameter and 7" tall are in a 3-x-6-ft area in a ca. 20-x-20-inch circular depression that could be natural. A light scatter of cans covering 60-x-30-ft surrounds the concentration. Artifacts include 1 hole-in-cap can, 3" tall and 3" diameter with top removed; 4 hole-in-cap cans, 3" tall and 3" diameter, opened with a can-opener; 1 hole-in-cap can; 1 can 6" diameter, 7" tall, top missing; 2 4" tall cans, knife-opened; 9 crushed hole-in-cap cans; 1 solder dot milk can, knife-opened; 2 crushed indeterminate cans, 3" tall; 3 hole-in-cap cans, 4" diameter.
5ST1544	H	One prospect pit with a small spoil pile on the north side. The pit measures 8-x-6-ft and ca. 2.5 ft deep at max.
5ST1545	H	One prospect pit and a spoil pile. The pit measures 20-x-15-ft, and the center of the pit is about 5 ft below surface on the downhill side. The spoil pile is the same size as the pit and extends 15 ft downslope.

PLANT LIST

At the request of Tom Fuller, a list of native plants that are documented in the Copper Mountain project area is included in Table 5. This list is taken from the botanical biological assessment and biological evaluation for this project (Orthner 2018). This information is provided primarily for the benefit of the Northern Ute Tribe, the Ute Mountain Ute Tribe, and the Southern Ute Tribe, representatives of which, in consultation with Mr. Fuller, have expressed interest in understanding the native vegetation communities that may be affected by projects on the WRNF, as the tribes historically occupied this area and used many plant species for food, shelter, medicinal, and other cultural uses; and retains interest in these plant communities.

Table 5. Vascular plant list, Copper Mountain project area

SCIENTIFIC NAME	COMMON NAME	FAMILY	ORIGIN*
Trees			
<i>Abies lasiocarpa</i> (= <i>A. bifolia</i>)	Subalpine fir	Pinaceae	N
<i>Picea engelmannii</i>	Engelmann spruce	Pinaceae	N
<i>Pinus contorta</i> var. <i>latifolia</i>	Lodgepole pine	Pinaceae	N
<i>Populus tremuloides</i>	Quaking aspen	Salicaceae	N
<i>Pseudotsuga menziesii</i>	Douglas-fir	Pinaceae	N
Shrubs/Subshrubs			
<i>Alnus incana</i> subsp. <i>tenuifolia</i>	Thinleaf alder	Betulaceae	N



SCIENTIFIC NAME	COMMON NAME	FAMILY	ORIGIN*
<i>Betula glandulosa</i>	Bog birch	Betulaceae	N
<i>Gaultheria humifusa</i>	Alpine spicewintergreen	Ericaceae	N
<i>Linnaea borealis</i>	Twinflower	Caprifoliaceae	N
<i>Lonicera involucrata</i> (= <i>Distegia</i>)	Twinberry honeysuckle	Caprifoliaceae	N
<i>Macronema discoideum</i>	Whitestem goldenbush	Asteraceae	N
<i>Potentilla fruticosa</i> (= <i>Pentaphylloides floribunda</i>)	Shrubby cinquefoil	Rosaceae	N
<i>Ribes inerme</i>	Whitestem gooseberry	Grossulariaceae	N
<i>Ribes montigenum</i>	Alpine prickly currant	Grossulariaceae	N
<i>Ribes wolfii</i>	Wolf's currant	Grossulariaceae	N
<i>Salix brachycarpa</i>	Barrenground willow	Salicaceae	N
<i>Salix drummondiana</i>	Drummond's willow	Salicaceae	N
<i>Salix geyeriana</i>	Geyer willow	Salicaceae	N
<i>Salix monticola</i>	Mountain willow	Salicaceae	N
<i>Salix petrophila</i> (= <i>S. arctica</i> var. <i>petraea</i>)	Alpine willow	Salicaceae	N
<i>Salix planifolia</i>	Planeleaf willow	Salicaceae	N
<i>Salix wolfii</i>	Wolf's willow	Salicaceae	N
<i>Vaccinium myrtillus</i>	Whortleberry	Ericaceae	N
<i>Vaccinium scoparium</i>	Grouse whortleberry	Ericaceae	N
Perennial Graminoids			
<i>Agrostis gigantea</i>	Redtop	Poaceae	I
<i>Agrostis scabra</i>	Ticklegrass, Rough bentgrass	Poaceae	N
<i>Alopecurus pratensis</i>	Meadow foxtail	Poaceae	I
<i>Bromus ciliatus</i> (= <i>Bromopsis canadensis</i>)	Fringed brome	Poaceae	N
<i>Bromus inermis</i>	Smooth brome	Poaceae	I
<i>Calamagrostis canadensis</i>	Bluejoint reedgrass	Poaceae	N
<i>Carex aquatilis</i>	Water sedge	Cyperaceae	N
<i>Carex arapahoensis</i>	Arapaho sedge	Cyperaceae	N
<i>Carex aurea</i>	Golden sedge	Cyperaceae	N
<i>Carex chalciolepis</i>	Holm sedge	Cyperaceae	N
<i>Carex disperma</i>	Softleaf sedge	Cyperaceae	N
<i>Carex ebenea</i>	Ebony sedge	Cyperaceae	N
<i>Carex foenea</i>	Dryspike sedge	Cyperaceae	N
<i>Carex nigricans</i>	Black alpine sedge	Cyperaceae	N
<i>Carex norvegica</i>	Norway sedge	Cyperaceae	N
<i>Carex nova</i>	Black sedge	Cyperaceae	N
<i>Carex scopulorum</i>	Mountain sedge	Cyperaceae	N
<i>Carex utriculata</i>	Beaked sedge	Cyperaceae	N
<i>Dactylis glomerata</i>	Orchardgrass	Poaceae	I



SCIENTIFIC NAME	COMMON NAME	FAMILY	ORIGIN*
<i>Danthonia intermedia</i>	Timber oatgrass	Poaceae	N
<i>Deschampsia cespitosa</i>	Tufted hairgrass	Poaceae	N
<i>Elymus scribneri</i>	spreading wheatgrass	Poaceae	N
<i>Elymus trachycaulus</i>	Slender wheatgrass	Poaceae	N
<i>Festuca brachyphylla subsp. coloradensis</i>	Colorado fescue	Poaceae	N
<i>Festuca saximontana</i>	Rocky Mountain fescue	Poaceae	N
<i>Festuca thurberi</i>	Thurber's fescue	Poaceae	N
<i>Juncus arcticus var. balticus (=J. balticus)</i>	Arctic rush	Juncaceae	N
<i>Juncus drummondii</i>	Drummond's rush	Juncaceae	N
<i>Juncus parryi</i>	Parry's rush	Poaceae	N
<i>Luzula parviflora</i>	Millet woodrush	Juncaceae	N
<i>Phleum commutatum</i>	Alpine timothy	Poaceae	N
<i>Phleum pratense</i>	Timothy	Poaceae	I
<i>Poa alpina</i>	Alpine bluegrass	Poaceae	N
<i>Poa fendleriana subsp. longiligula</i>	Muttongrass	Poaceae	N
<i>Poa glauca subsp. rupicola</i>	Timberline bluegrass	Poaceae	N
<i>Poa palustris</i>	Fowl bluegrass	Poaceae	N
<i>Trisetum spicatum</i>	Spike trisetum	Poaceae	N
<i>Trisetum wolfii</i>	Wolf's trisetum	Poaceae	N
Perennial Forbs			
<i>Achillea lanulosa</i>	Yarrow	Asteraceae	N
<i>Aconitum columbianum</i>	Monkshood	Ranunculaceae	N
<i>Agoseris aurantiaca</i>	Orange agoseris	Asteraceae	N
<i>Agoseris glauca</i>	Pale agoseris	Asteraceae	N
<i>Androsace septentrionalis</i>	Pygmyflower rockjasmine	Primulaceae	N
<i>Anemonastrum narcissiflorum subsp. zephyrum</i>	Narcissus anemone	Ranunculaceae	N
<i>Anemone parviflora</i>	Smallflowered anemone	Ranunculaceae	N
<i>Angelica grayi</i>	Gray's angelica	Apiaceae	N
<i>Angelica pinnata</i>	Small-leaf angelica	Apiaceae	N
<i>Antennaria corymbosa</i>	Flat-top pussytoes	Asteraceae	N
<i>Antennaria media</i>	Rocky Mountain pussytoes	Asteraceae	N
<i>Antennaria parvifolia</i>	Small-leaf pussytoes	Asteraceae	N
<i>Antennaria pulcherrima subsp. anaphaloides</i>			
<i>Antennaria rosea</i>	Rosy pussytoes	Asteraceae	N



SCIENTIFIC NAME	COMMON NAME	FAMILY	ORIGIN*
<i>Aquilegia elegantula</i>	Western red columbine	Ranunculaceae	N
<i>Arnica cordifolia</i>	Heartleaf arnica	Asteraceae	N
<i>Arnica mollis</i>	Hairy arnica	Asteraceae	N
<i>Arnica parryi</i>	Parry's arnica	Asteraceae	N
<i>Artemisia campestris</i> var. <i>purshii</i> (= <i>A.borealis</i> ; <i>Oligosporus groenlandicus</i>)	Boreal sagewort	Asteraceae	N
<i>Artemisia scopulorum</i>	Dwarf sagewort	Asteraceae	N
<i>Astragalus alpinus</i>	Alpine milkvetch	Fabaceae	N
<i>Besseyia alpina</i>	Alpine kittentails	Plantaginaceae	N
<i>Bistorta bistortoides</i>	American bistort	Polygonaceae	N
<i>Bistorta vivipara</i> (= <i>Polygonum</i>)	Alpine bistort	Polygonaceae	N
<i>Boechera stricta</i> (= <i>B. drummondii</i>)	Drummond's rockcross	Brassicaceae	N
<i>Caltha leptosepala</i> (= <i>Psychrophila</i>)	Marsh marigold	Ranunculaceae	N
<i>Calypso bulbosa</i>	Fairy slipper orchid	Orchidaceae	N
<i>Campanula rotundifolia</i>	Harebell	Campanulaceae	N
<i>Campanula uniflora</i>	arctic bellflower	Campanulaceae	N
<i>Cardamine cordifolia</i>	Heartleaf bittercross	Brassicaceae	N
<i>Castilleja miniata</i>	Giant red Indian paintbrush	Orobanchaceae	N
<i>Castilleja occidentalis</i>	Western Indian paintbrush	Orobanchaceae	N
<i>Castilleja rhexifolia</i>	Splitleaf Indian paintbrush	Orobanchaceae	N
<i>Castilleja sulphurea</i>	Sulphur Indian paintbrush	Orobanchaceae	N
<i>Cerastium strictum</i>	Field chickweed	Caryophyllaceae	N
<i>Chamerion angustifolium</i> (<i>Epilobium</i>)	Fireweed	Onagraceae	N
<i>Cirsium arvense</i> (= <i>Breea</i>)	Canada thistle	Asteraceae	I B
<i>Cirsium eatonii</i>	Eaton's thistle	Asteraceae	N
<i>Cirsium scopulorum</i>	Mountain thistle	Asteraceae	N
<i>Conioselinum scopulorum</i>	Hemlock parsley	Apiaceae	N
<i>Cymopterus alpinus</i> (= <i>Oreoxis alpina</i>)	Alpine springparsley	Apiaceae	N
<i>Cymopterus lemmonii</i> (<i>Pseudocymopterus montanus</i>)	Moutain spring parsley	Apiaceae	N
<i>Delphinium barbeyi</i>	Subalpine larkspur	Ranunculaceae	N
<i>Draba aurea</i>	Golden draba	Brassicaceae	N
<i>Draba crassa</i>	Thickleaf draba	Brassicaceae	N
<i>Draba crassifolia</i>	Snowbed draba	Brassicaceae	N



SCIENTIFIC NAME	COMMON NAME	FAMILY	ORIGIN*
<i>Dryas octopetala</i> subsp. <i>hookeriana</i>	Hooker's mountain-avens	Rosaceae	N
<i>Eremogone fendleri</i>	Fendler's sandwort	Caryophyllaceae	N
<i>Erigeron compositus</i>	Cutleaf daisy	Asteraceae	N
<i>Erigeron glacialis</i> (= <i>E. peregrinus</i> subsp. <i>callianthemus</i>)	Subalpine fleabane	Asteraceae	N
<i>Erigeron grandiflorus</i> (= <i>E. simplex</i>)	Alpine fleabane	Asteraceae	N
<i>Erigeron melanocephalus</i>	Blackhead fleabane	Asteraceae	N
<i>Erigeron speciosus</i>	Aspen fleabane	Asteraceae	N
<i>Eriogonum subalpinum</i>	sulphur-flower buckwheat	Polygonaceae	N
<i>Eritrichum aretioides</i>	Alpine forget-me-not	Boraginaceae	N
<i>Erysimum capitatum</i>	Western wallflower	Brassicaceae	N
<i>Fragaria virginiana</i>	Mountain strawberry	Rosaceae	N
<i>Gentiana algida</i> (= <i>Gentianodes</i>)	Arctic gentian	Gentianaceae	N
<i>Gentiana parryi</i> (= <i>Pneumonanthe</i>)	Parry's gentian	Gentianaceae	N
<i>Goodyera oblongifolia</i>	Rattlesnake plantain orchid	Orchidaceae	N
<i>Heterotheca villosa</i>	Hairy false goldenaster	Asteraceae	N
<i>Heuchera parvifolia</i> var. <i>nivalis</i>	Alpine alumroot	Saxifragaceae	N
<i>Hieracium triste</i> (= <i>Chlorocrepis</i>)	Slender hawkweed	Asteraceae	N
<i>Hirculus platysepalus</i> subsp. <i>crandallii</i>	Crandall's saxifrage	Saxifragaceae	N
<i>Hymenoxys grandiflora</i> (= <i>Rydbergia</i>)	Old Man of the Mountain	Asteraceae	N
<i>Lewisia pygmaea</i>	Alpine lewisia	Montiaceae	N
<i>Ligusticum tenuifolium</i>	Idaho licorice-root	Apiaceae	N
<i>Listera borealis</i>	Northern twayblade	Orchidaceae	N
<i>Listera cordata</i> subsp. <i>nephrophylla</i>	Heartleaf twayblade	Orchidaceae	N
<i>Mertensia alpina</i>	Alpine bluebells	Boraginaceae	N
<i>Mertensia ciliata</i>	Chiming bells	Boraginaceae	N
<i>Micranthes odontoloma</i>	Brook saxifrage	Saxifragaceae	N
<i>Micranthes rhomboidea</i>	Diamondleaf saxifrage	Saxifragaceae	N
<i>Mimulus glabratus</i>	Roundleaf monkeyflower	Scrophulariaceae	N
<i>Minuartia obtusiloba</i> (= <i>Lidia</i>)	Alpine stitchwort	Caryophyllaceae	N



SCIENTIFIC NAME	COMMON NAME	FAMILY	ORIGIN*
<i>Mitella pentandra</i>	Fivestamen miterwort	Saxifragaceae	N
<i>Moneses uniflora</i>	Wood nymph	Ericaceae	N
<i>Oreochrysum parryi</i>	Parry's goldenrod	Asteraceae	N
<i>Oxypolis fendleri</i>	Fendler's cowbane	Apiaceae	N
<i>Oxytropis deflexa subsp. deflexa</i>	Nodding locoweed	Fabaceae	N
<i>Oxytropis splendens</i>	Showy locoweed	Fabaceae	N
<i>Packera cana</i>	Woolly groundsel	Asteraceae	N
<i>Parnassia fimbriata</i>	Fringed grass of Parnassus	Parnassiaceae	N
<i>Paronychia pulvinata</i>	Rocky Mountain nailwort	Caryophyllaceae	N
<i>Pedicularis groenlandica</i>	Elephant's head lousewort	Orobanchaceae	N
<i>Pedicularis racemosa subsp. alba</i>	Sickletop lousewort	Orobanchaceae	N
<i>Penstemon whippleanus</i>	Whipple's penstemon	Plantaginaceae	N
<i>Phacelia sericea</i>	Silky phacelia	Hydrophyllaceae	N
<i>Platanthera dilatata (=Limnorchis dilatata)</i>	White bog orchid, scentbottle	Orchidaceae	N
<i>Platanthera huronensis</i>	Green bog orchid	Orchidaceae	N
<i>Platanthera obtusata (=Lysiella obtusata)</i>	Blunt-leaved orchid	Orchidaceae	N
<i>Polemonium pulcherrimum subsp. delicatum</i>	Jacob's-ladder	Polemoniaceae	N
<i>Polemonium viscosum</i>	Sticky polemonium	Polemoniaceae	N
<i>Potentilla diversifolia</i>	Varileaf cinquefoil	Rosaceae	N
<i>Potentilla hippiana</i>	Woolly cinquefoil	Rosaceae	N
<i>Potentilla nivea</i>	Snow cinquefoil	Rosaceae	N
<i>Potentilla pulcherrima</i>	Beautiful cinquefoil	Rosaceae	N
<i>Primula parryi</i>	Parry's primrose	Primulaceae	N
<i>Pterospora andromedea</i>	Woodland pinedrops	Ericaceae	N
<i>Pulsatilla patens subsp. multifida</i>	Pasque flower	Ranunculaceae	N
<i>Pyrola chlorantha</i>	Greenflowered wintergreen	Ericaceae	N
<i>Pyrola rotundifolia subsp. asarifolia</i>	Roundleaf wintergreen	Pyrolaceae	N
<i>Rhodiola rhodantha (=Clemensia)</i>	Queen's crown, redpod stonecrop	Crassulaceae	N
<i>Rumex acetosella (=Acetosella vulgaris)</i>	Sheep sorrel	Polygonaceae	I
<i>Saxifraga bronchialis var. austromontana</i>	Spotted saxifrage	Saxifragaceae	N



SCIENTIFIC NAME	COMMON NAME	FAMILY	ORIGIN*
(= <i>Ciliaria austromontana</i>)			
<i>Saxifraga rivularis</i>	Weak saxifrage	Saxifragaceae	N
<i>Sedum lanceolatum</i>	Stonecrop	Crassulaceae	N
<i>Senecio amplexans</i> var. <i>amplexans</i> (= <i>Ligularia</i>)	Showy alpine ragwort	Asteraceae	N
<i>Senecio atratus</i>	Tall blacktip ragwort	Asteraceae	N
<i>Senecio crassulus</i>	Thickleaf ragwort	Asteraceae	N
<i>Senecio fremontii</i> var. <i>blitoides</i>	Dwarf mountain ragwort	Asteraceae	N
<i>Senecio integerrimus</i>	Lambstongue groundsel	Asteraceae	N
<i>Senecio triangularis</i>	Arrowleaf groundsel	Asteraceae	N
<i>Sibbaldia procumbens</i>	Creeping sibbaldia	Rosaceae	N
<i>Silene acaulis</i>	Moss campion	Caryophyllaceae	N
<i>Silene drummondii</i> (= <i>Gastrolychnis</i>)	Drummond's catchfly	Caryophyllaceae	N
<i>Smelowskia americana</i> (= <i>S. calycina</i> var. <i>americana</i>)	American false candytuft	Brassicaceae	N
<i>Solidago multiradiata</i>	Rocky Mountain goldenrod	Asteraceae	N
<i>Spiranthes romanzoffiana</i>	Hooded lady's tresses	Orchidaceae	N
<i>Swertia perennis</i>	Star gentian; felwort	Gentianaceae	N
<i>Symphyotrichum foliaceum</i> (= <i>Aster</i>)	Leafy bracted aster	Asteraceae	N
<i>Symphyotrichum lanceolatum</i> subsp. <i>hesperium</i> (= <i>Aster</i>)	White panicle aster	Asteraceae	N
<i>Taraxacum officinale</i>	Dandelion	Asteraceae	I
<i>Thalictrum alpinum</i>	Alpine meadow-rue	Ranunculaceae	N
<i>Tonestus pygmaeus</i> (= <i>Haplopappus</i>)	Pygmy goldenweed	Asteraceae	N
<i>Trifolium dasyphyllum</i>	Alpine clover	Fabaceae	N
<i>Trifolium nanum</i>	Dwarf clover	Fabaceae	N
<i>Trifolium parryi</i>	Parry's clover	Fabaceae	N
<i>Trifolium pratense</i>	Red clover	Fabaceae	I
<i>Trifolium repens</i>	White clover	Fabaceae	I
<i>Trollius albiflorus</i>	American globeflower	Ranunculaceae	N
<i>Valeriana capitata</i> subsp. <i>acutiloba</i>	sharpleaf valerian	Valerianaceae	N
<i>Veronica nutans</i>	American alpine speedwell	Plantaginaceae	N



SCIENTIFIC NAME	COMMON NAME	FAMILY	ORIGIN*
<i>Viola adunca</i>	Hookedspur violet	Violaceae	N
<i>Viola macloskeyi subsp. pallens</i>	Smooth white violet	Violaceae	N
<i>Zigadenus elegans (=Anticlea)</i>	Mountain deathcamas	Melanthiaceae	N
Ferns and Fern Allies			
<i>Botrychium crenulatum</i>	Crenulate moonwort	Ophioglossaceae	N
<i>Botrychium echo</i>	Echo moonwort	Ophioglossaceae	N
<i>Botrychium lanceolatum subsp. lanceolatum</i>	Triangle moonwort	Ophioglossaceae	N
<i>Botrychium minganense</i>	Mingan moonwort	Ophioglossaceae	N
<i>Botrychium neolunaria</i>	Common moonwort	Ophioglossaceae	N
<i>Botrychium pinnatum</i>	Oakleaf moonwort	Ophioglossaceae	N
<i>Cryptogramma acrostichoides</i>	American rockbrake	Pteridaceae	N
<i>Cystopteris fragilis</i>	Fragile fern	Dryopteridaceae	N
<i>Cystopteris montana</i>	Mountain bladderfern	Dryopteridaceae	N
<i>Equisetum arvense</i>	Field horsetail	Equisetaceae	N
<i>Equisetum laevigatum (=Hippochaete)</i>	Smooth horsetail	Equisetaceae	N
<i>Equisetum variegatum subsp. variegatum (=Hippochaete)</i>	variegated scouringrush	Equisetaceae	N
<i>Lycopodium annotinum</i>	Stiff clubmoss	Lycopodiaceae	N
<i>Selaginella densa</i>	Rocky Mountain spikemoss	Selaginellaceae	N
Annual/Biennial Forbs			
<i>Gentianopsis thermalis</i>	Rocky Mountain fringed gentian	Gentianaceae	N
<i>Thlaspi arvense</i>	Field pennycress	Brassicaceae	I
<i>Tripleurospermum perforatum</i>	Scentless chamomile	Asteraceae	I B
Notes: Nomenclature generally follows Flora of Colorado (Ackerfield 2015) with Weber and Wittmann (2012) synonyms in parentheses. Origin: N=Native; I=Introduced, I+A,B,C,W = Colorado Listed Noxious Weed and Rank. Plants Code: National Code from the NRCS PLANTS National database. Prepared by Rea Orthner of Peak Ecological Services, LLC, Nederland, CO.			

EVALUATION OF RESEARCH

Metcalf considers the results of this inventory reliable and representative of the area. Although ground visibility was obscured by dense vegetation in some locations and by dense



pine duff in others, field conditions were adequate for the discovery of cultural resources. The previously unrecorded cultural resources that were found and recorded were expected, given the existing sites and isolates in the area.

SUMMARY AND MANAGEMENT RECOMMENDATIONS

Metcalf undertook cultural resource investigations under contract to SE Group, Inc., at Copper Mountain Resort, Summit County, Colorado, because the resort has proposed multi-season improvements. At the time of October fieldwork, the project area covered 570 acres. Because 374 acres had been previously inventoried for cultural resources, fieldwork included 196 acres of Class III pedestrian inventory in areas not covered by previous recent inventories. After Metcalf conducted the October fieldwork, project design changes were made in December, 2018; thus, some proposed developments in the updated project area have not yet been inventoried for cultural resources. These new developments, consisting of trails and camp sites, cover 84 acres and will be surveyed in the 2019 field season and reported as an addendum to this document. It is anticipated that any newly discovered NRHP eligible cultural resources during 2019 survey will be avoided because the location of the proposed trails and campsites is flexible and can be easily re-designed.

During October fieldwork, five resources were newly recorded or revisited. Two are sites, and three are isolated finds. The three isolated finds are recommended as not eligible for inclusion on the National Register. The two sites (5ST109, 5ST585) were previously recorded and were updated for the current project. Both are recommended not eligible for inclusion on the National Register; however, avoidance of historic site 5ST109 is recommended due to the unknown nature and function of the cairn, Feature 2.

In addition, the OAHP-mapped site location of a collapsed and decaying multi-room log cabin with a small midden (5ST110) fell in the survey area; it was not evaluated during recording in 1976. This site was not observed during the October inventory, however, its location also overlaps the portion of the redesigned project area proposed for 2019 fieldwork; another attempt will be made to relocate the site at that time. It is possible that, if found, the site could extend into the currently reported project area.

Pending the relocation of unevaluated historic site 5ST110 in the summer of 2019, Metcalf recommends a finding of *no historic properties* for the currently reported project area. With avoidance of site 5ST109, no further work is recommended for the currently reported project area.



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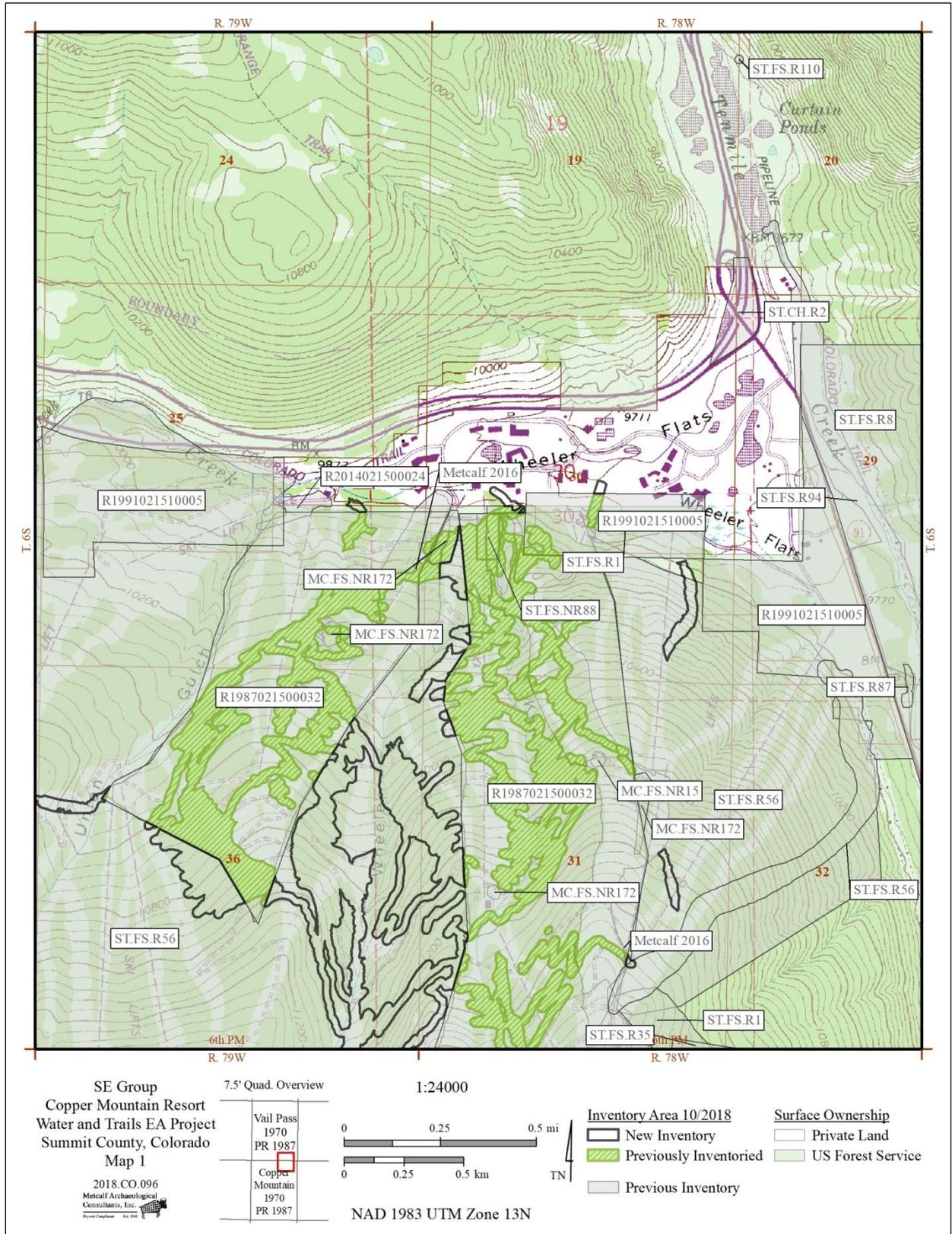


APPENDIX A

Project Area Maps with Cultural Resources and Previous Inventories (agency copies only)

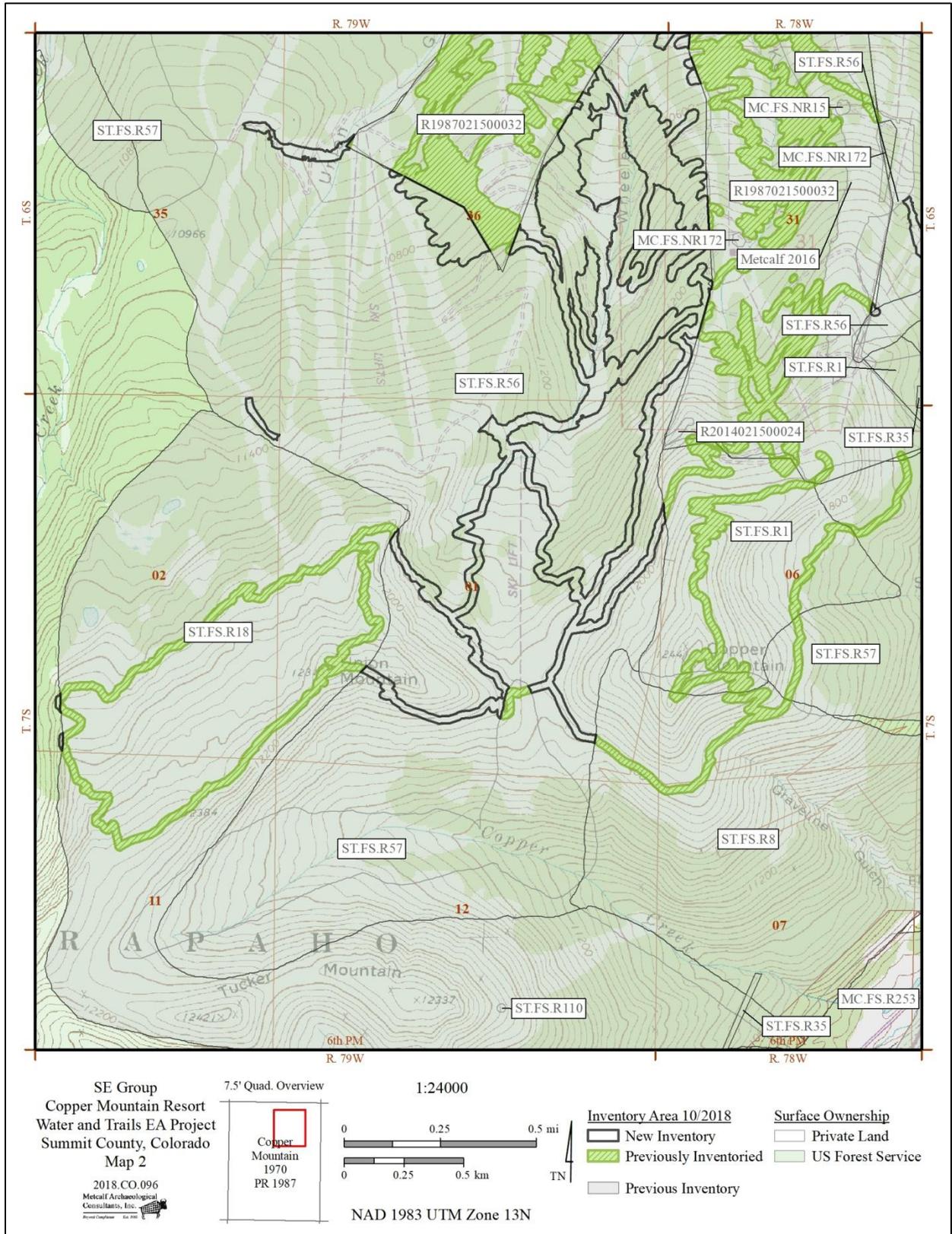






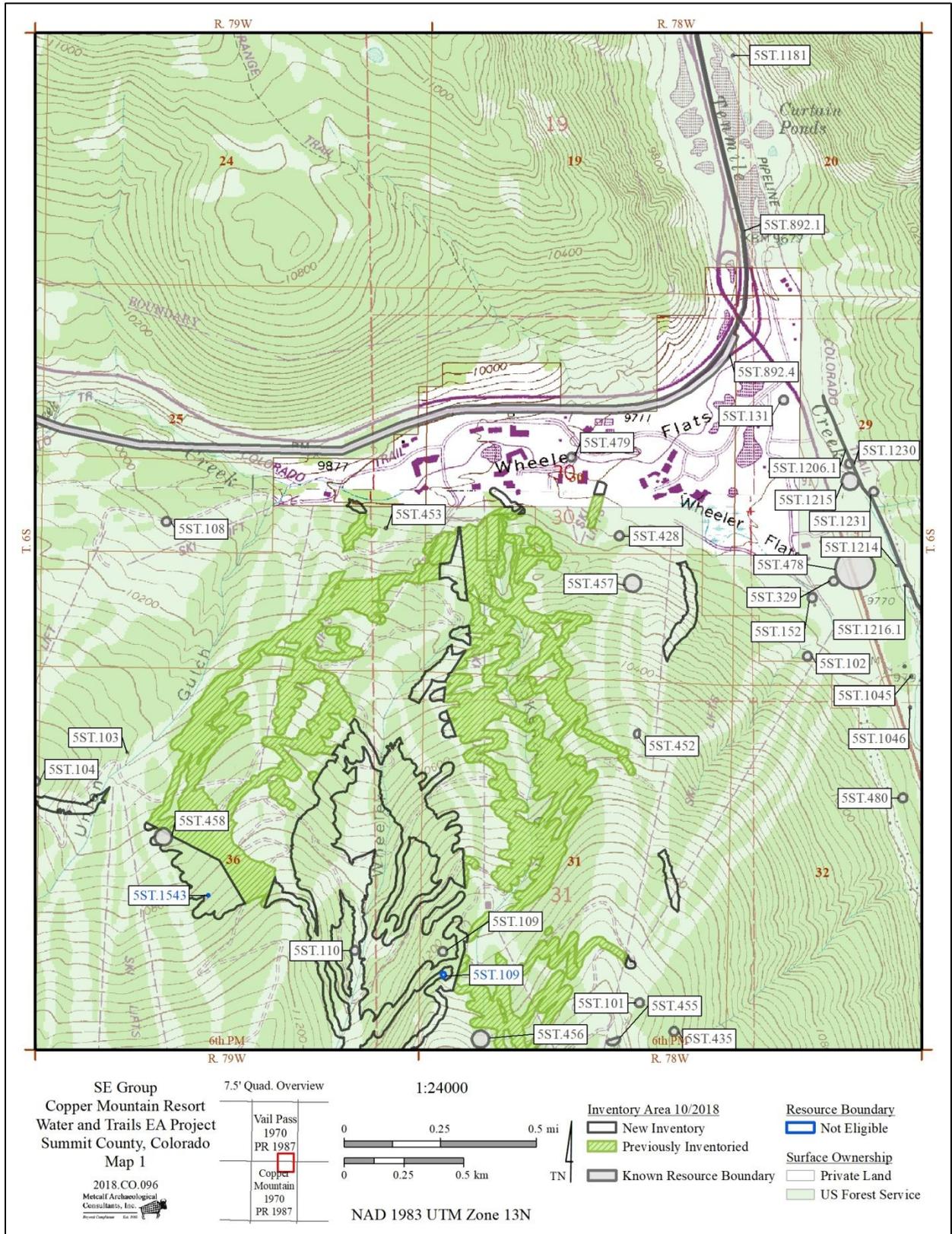
Map 1. Project area location, October 2018 fieldwork, previous inventories, Map 1 of 2.





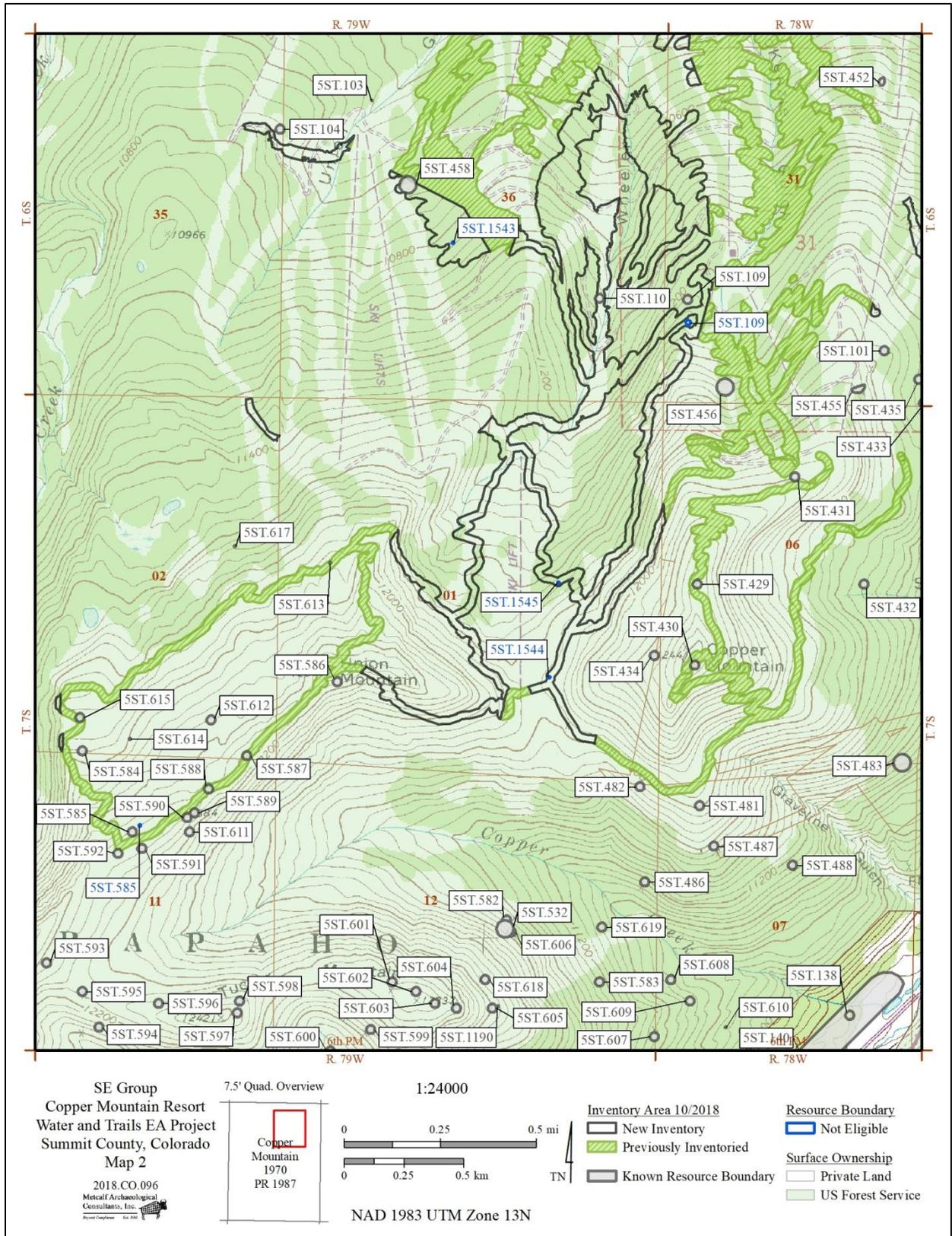
Map 2. Project area location, October 2018 fieldwork, previous inventories, Map 2 of 2.





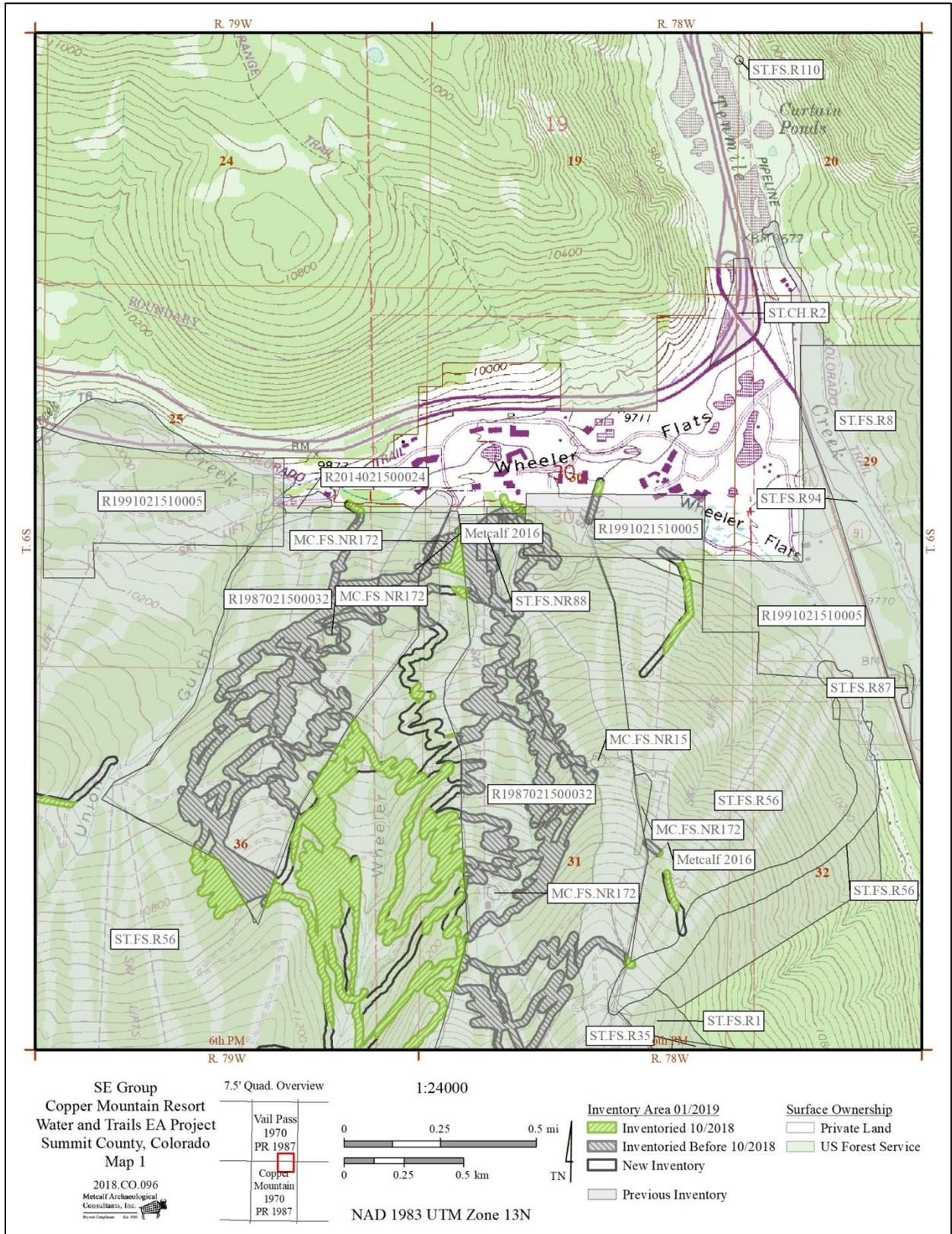
Map 3. Project area location, October fieldwork, resources, Map 1 of 2.





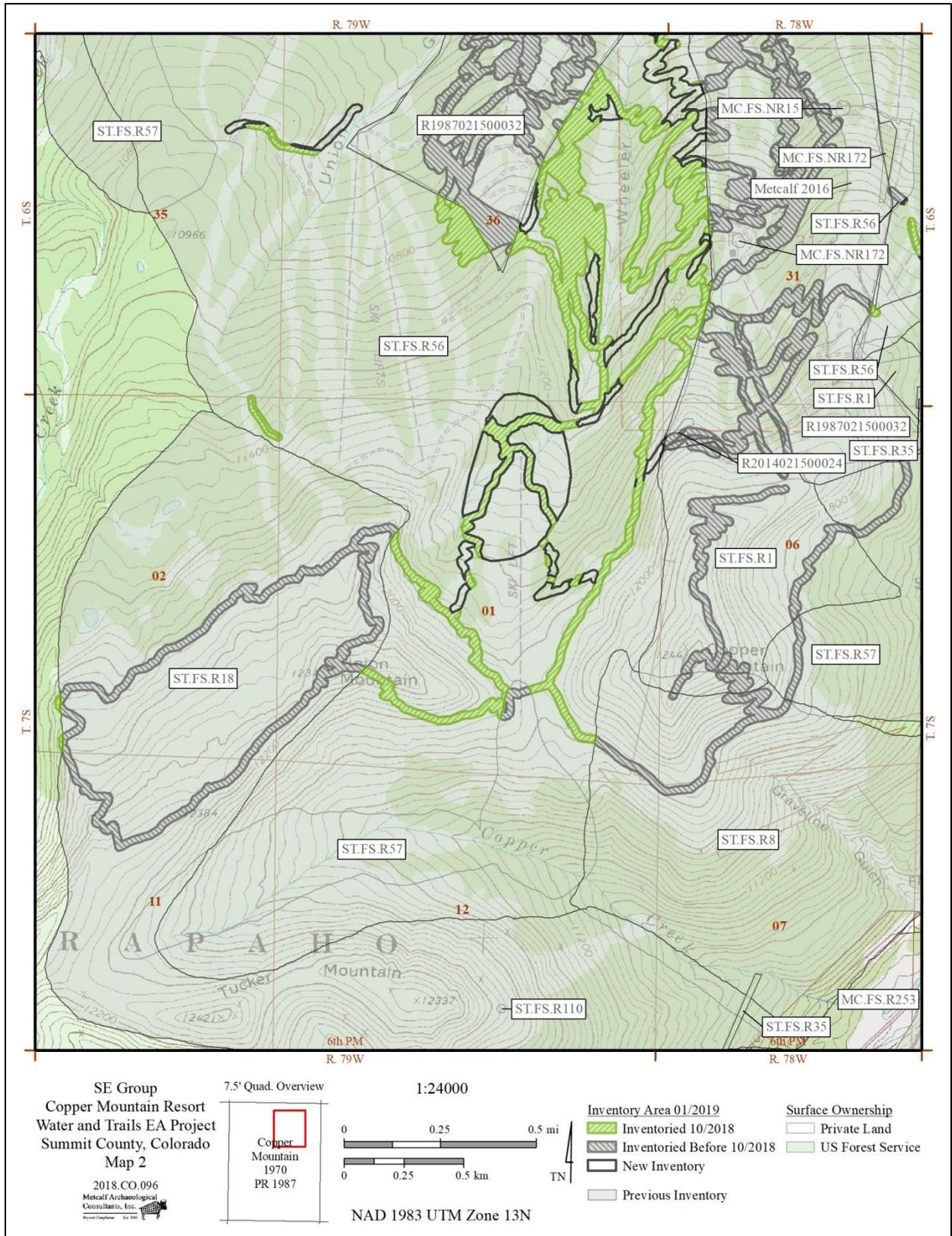
Map 4. Project area location, October fieldwork, resources, Map 2 of 2.





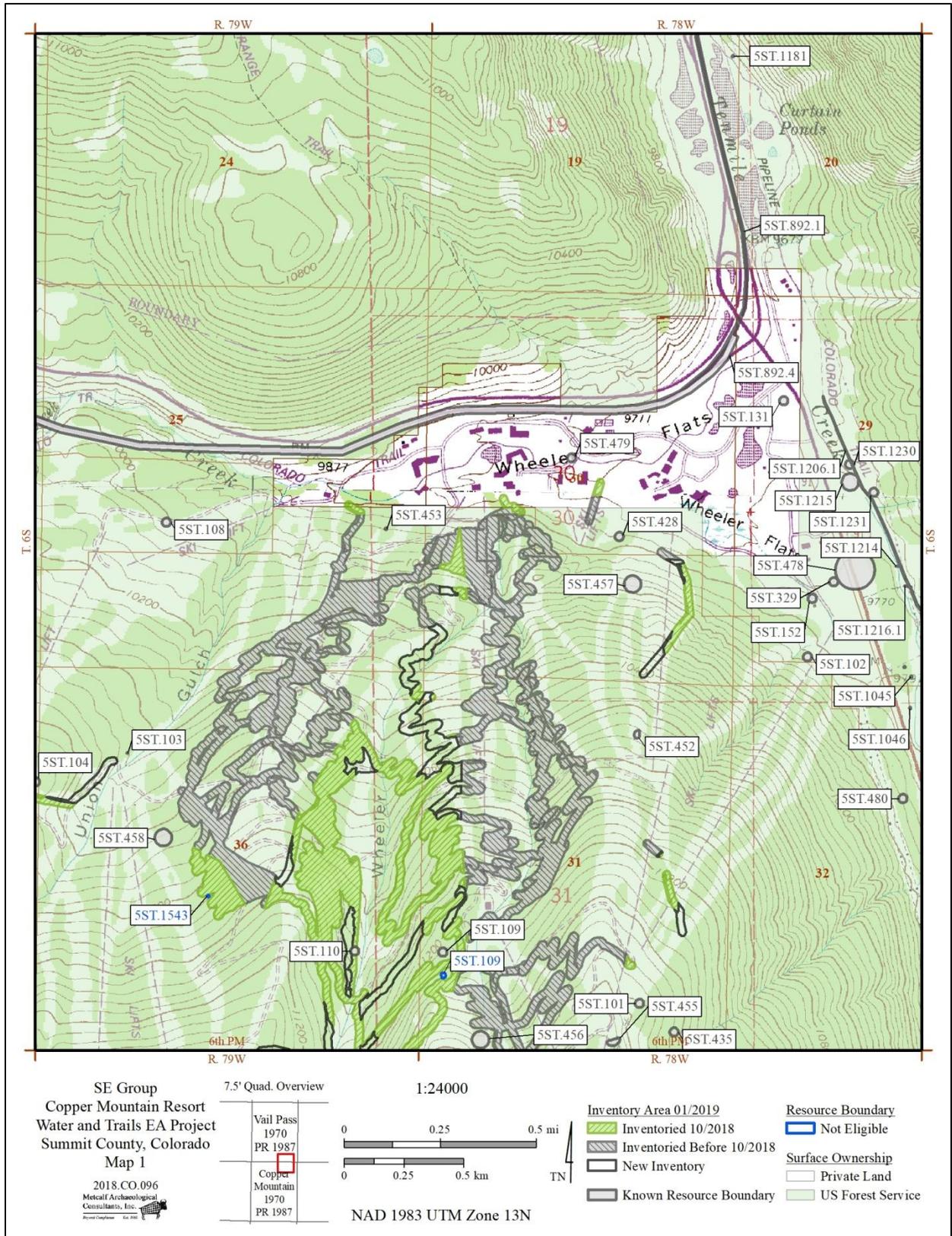
Map 5. Project area location, planned 2019 fieldwork, previous inventories, Map 1 of 2.





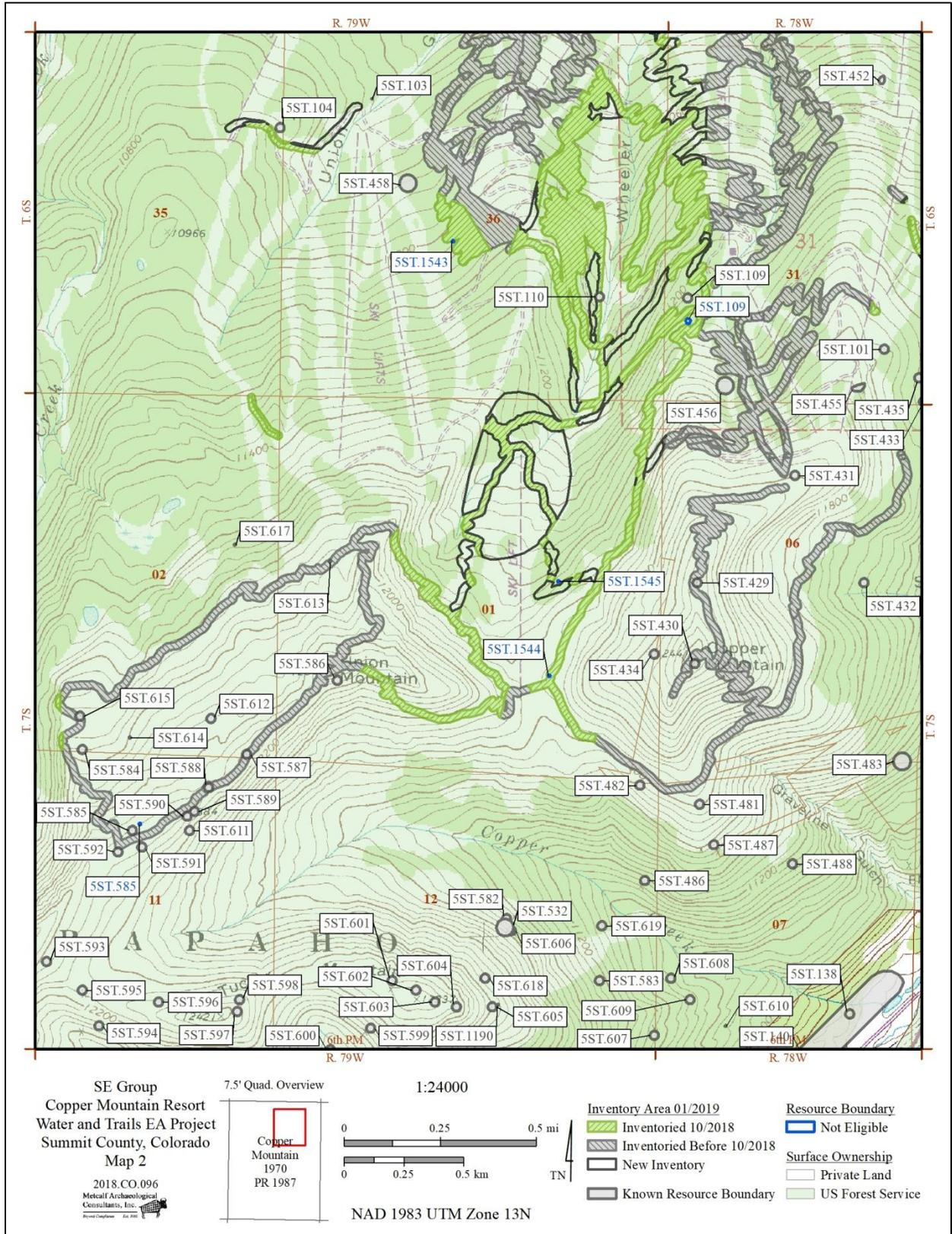
Map 6. Project area location, planned 2019 fieldwork, previous inventories, Map 2 of 2





Map 7. Project area location, planned 2019 fieldwork, previous resources, Map 1 of 2





Map 8. Project area location, planned 2019 fieldwork, previous resources, Map 2 of 2

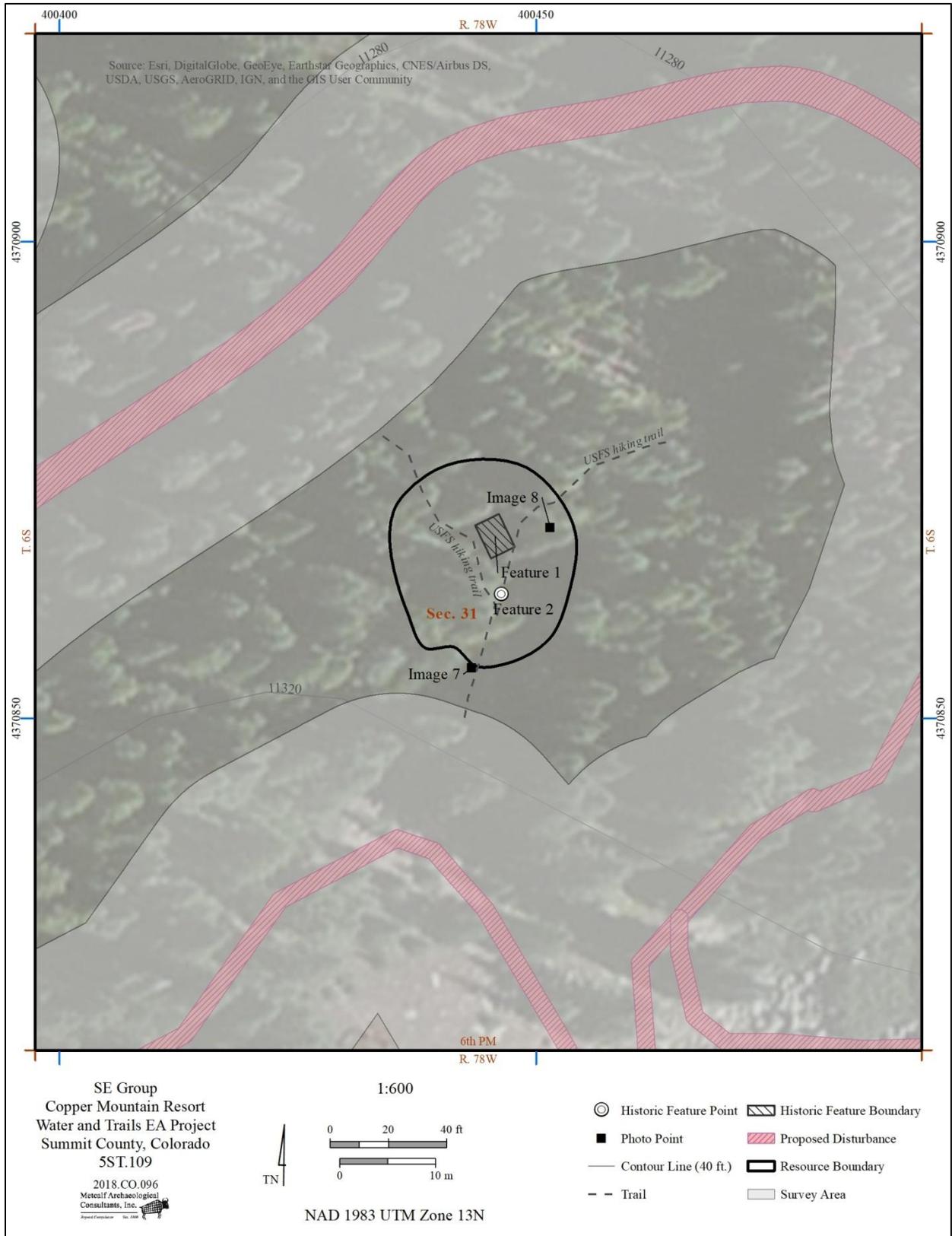


APPENDIX B

Site Sketch Maps (agency copies only)

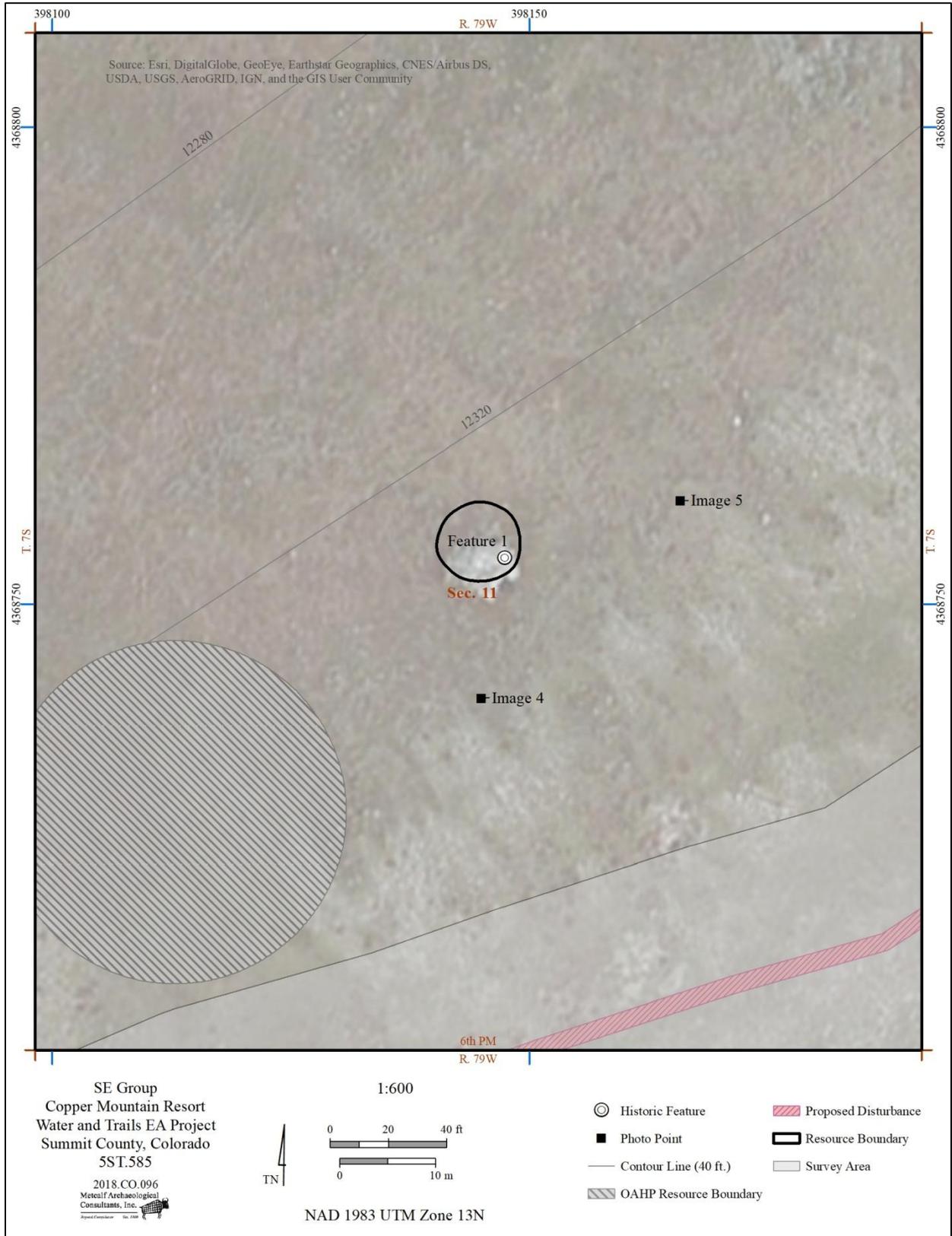






Map 1. 5ST109 map





Map 2. 5ST585 map



APPENDIX C

OAHP Cultural Resource Forms (separate cover, agency copies only)



